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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

Member ABP

JUNE, 1943

Vol. 96, No. 6

Fire from the Air — Crashing into Gas Tank, Low-Flying Bomber Starts Fire that Wrecks Tank. (See Page 328)

A CASE - SHEPPERD - MANN PUBLICATION

Our Pledge to You

In the name of Humanity we shall always serve you faithfully

- For your protection our Technical Staff provides adequate laboratory controls and checks all your equipment thoroughly.
- For your consideration we manufacture our resuscitator for giving best results.
- Your Guarantee: A 2 year Factory Guarantee.
- Accepted by American Medical Association Council of Physical Therapy.

Conscientious adherence to this J.H.E. Pledge has gained for us the priceless good-will of thousands of users throughout the country. Approval of our policy is evidenced by the fact that many fire chiefs specify EMERSON RESUSCITATORS by name.

Emerson Resuscitators are extensively used by our armed forces, fire departments, police departments, industrial plants, state governments and municipal hospitals.

J. H. EMERSON CO.
CAMBRIDGE MASS.

Representatives in All Principal Cities

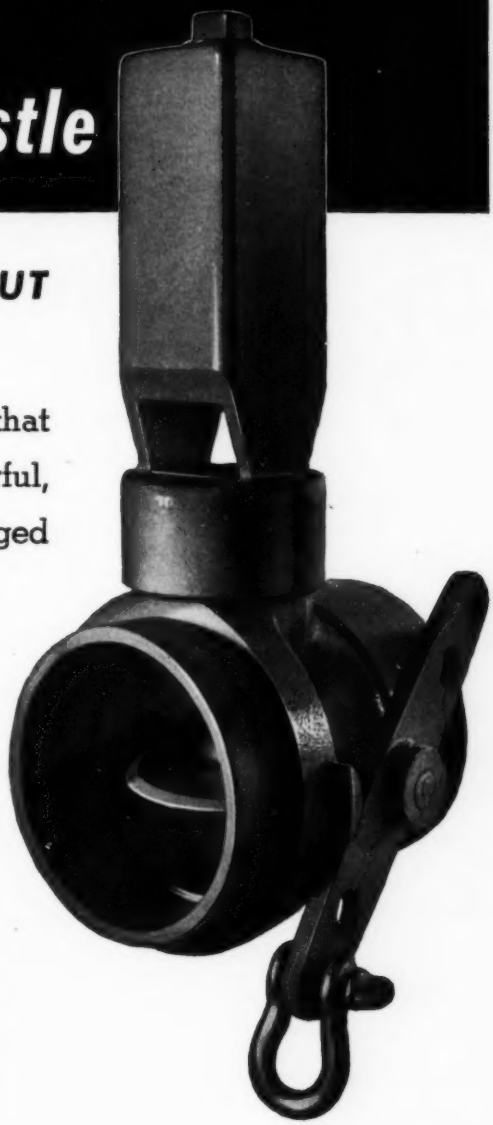
Manufacturers of
Diaphragm Respirators (Iron Lung) Since 1931

YOUR MARK OF ASSURANCE
JEH

THE CLEAR-CUT WARNING SIGNAL—

FEDERAL

Fury exhaust whistle



AVAILABLE TO YOU WITHOUT A PRIORITY

• Here is a clear-cut warning signal that gets instant action. Its tone is powerful, penetrating, and unmistakable. Its rugged and simple construction—only two working parts—assures dependability on all types of emergency vehicles—fire trucks, ambulances, police cars.

Made in two sizes for exhaust pipes from 4½" to 1½" in diameter.

For communities which do not prohibit the use of sirens, FEDERAL can supply a wide variety of electric sirens.

FEDERAL ELECTRIC CO., INC.

SIREN HEADQUARTERS

8702 South State Street Chicago, Illinois

FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

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FRED SHEPPERD
Editor

Yep, Double-headed!

IT is interesting and significant that every "for sale" advertisement in FIRE ENGINEERING is double-headed: it benefits not only the advertiser, who has something to sell, but the buyer, who thus gets something he really needs.

● The following letter from an eastern advertiser tells the story:

● "Gentlemen:

Please tell me the closing date for another classified ad in your next issue.

I sold my ..... from the last advertisement and could have sold nine more if I had had them!

Thanks for sending me your advertisement about advertising. It was well worth the few dollars it cost."

● That, in a nut-shell, is the story of most FIRE ENGINEERING advertising.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the tenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York, 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U. S. and Latin America, $2 a year; Canada, $2.50; Foreign, $3; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1943, by Case-Shepperd-Mann Publishing Corp. ¶KARL M. MANN, President; I. HERBERT CASE, Vice-President and General Manager; W. J. GIBSON, Eastern Representative; WM. H. TOPHAM, Circulation Manager. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 6 No. Michigan Ave.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd. ¶Printed in U. S. A.

A CASE-SHEPPERD-MANN PUBLICATION
"*Specialized* Leadership"

★ FAMOUS SPACE SAVER

Shown above is the new way or "space saver" method of banking ladder sections. Because of its low banking height and increased climbing space this arrangement is ideal for three-section ladders.

INSIST ON . . .

DUO Safety

USE A GOOD LADDER OR STAY ON THE GROUND

The First Name in Safety!

Ask any DUO-Safety user about his experience with this modern equipment and you'll quickly understand why DUO-Safety is so widely used and so highly regarded where merit is the determining factor! Time-tested superiority with a long record of dependable performance — that's DUO-Safety's famous fire ladder line!

SERIES 150—Represents the adaptation of the "space saver" principle to 3-section truss ladders over 30 feet. Particularly desirable for service trucks, where it's important to hold down weight and overall height.

SERIES 250—Similar to above in construction except the center web is solid instead of trussed as Series 150. Unusually sturdy because of its channel construction. Made in sizes over 30 feet.

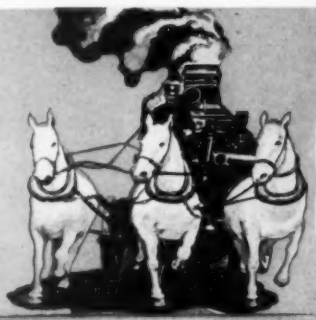
SERIES 350—Similar to 250, only it's built in sizes under 30 feet. Meets demand for short extension ladder that's compact and not too long when banked. Especially for enclosed type bodies.

Write!

DUO-SAFETY LADDER CORP.
809 NINTH STREET,
OSHKOSH, WIS., U. S. A.

The Leadership of AMERICAN-LAFRANCE* is a Tradition of the Fire Service

YESTERDAY



You bought AMERICAN-LAFRANCE fire engines for the reliable performance that established their leadership and made them the standard of the fire service.

TODAY

You buy AMERICAN-LAFRANCE fire engines and equipment for their reliability, modern appearance, utility, and the service facilities that have contributed to traditional leadership.

TOMORROW

You will buy AMERICAN-LAFRANCE fire engines and equipment for those same qualities that have proved our leadership in reliability, performance, utility and styling in keeping with practical fire fighting.

* LAFRANCE-FOAMITE in Canada

Do not wait till tomorrow to instruct your Fire Chief to attend the I.A.F.C. Conference in Chicago, Aug. 31 - Sept. 3. He will gain valuable information on the latest methods for protecting your community against fire.

AMERICAN-LAFRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.
LAFRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO, 9, ONTARIO, CANADA

PROVIDENCE, R.I.

Important New England Industrial Center

Rescue Company No. 1, Providence Fire Dept., with its two E & J units

Is now fully equipped with

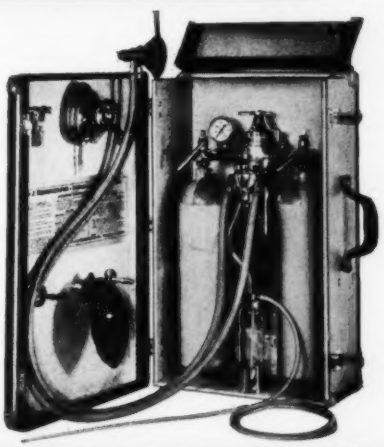
The E & J RESUSCITATOR INHALATOR and ASPIRATOR

FOUNDED more than 300 years ago and famous throughout American history, Providence, R. I., stands out as one of our nation's most interesting and progressive cities. Today, particularly, it is a hub of huge war production activity.

The efficiency of the Providence Fire Department has more than kept pace with the city's progress. For one thing, it is rendering highly effective first aid service. That the Department is now fully equipped with E & J resuscitators — carried by all of its rescue companies and in the cars of each of its battalion chiefs — is the soundest kind of evidence of E & J superiority. This has a particular meaning in the fact that the E & J was adopted after the Department's three years of highly successful experience with this modern breathing machine.

Ask any E & J user what his experience has been and you'll understand why E & J is first choice in first aid everywhere.

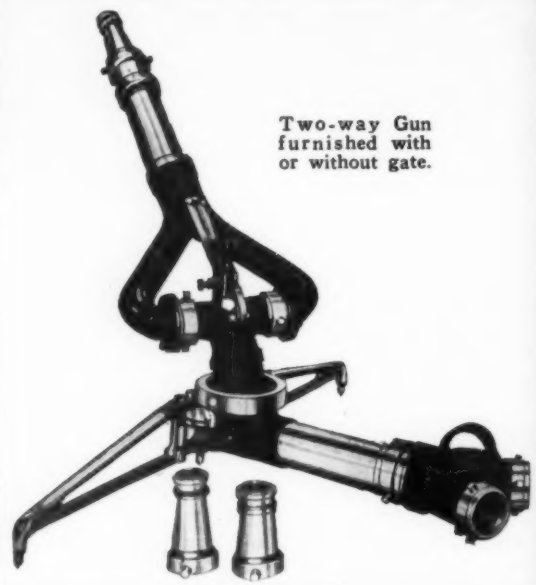
For further information write to any of our distributors listed below.



E & J MANUFACTURING CO., GLENDALE, CALIF.

Philadelphia — 17 East 42nd St., New York City — 530 Fernando St., Pittsburgh — McKeesport & Robbins, Birmingham, Ala. — 581 Boylston St., Boston — 6445 W. Washington, Chicago — 3900 Grandy Ave., Detroit, Michigan

Pioneers and Specialists in Mechanical Artificial Respiration



Two-way Gun furnished with or without gate.

Increased modern facilities mean better

EASTMAN

FIRE FIGHTING PRODUCTS

Due to the demand of the war effort, we have enlarged our plant and modernized our equipment in such a way that will enable us to serve you better in the coming years.

While we regret that in the present rush of government work your orders may be subject to some delay, we can assure you that with our improved facilities we will be in a better condition to fill your future requirements with a better and more efficient product, than we have ever been able to do before.

It is our ambition to go right on supplying fire departments with our fire fighting products, which have proven so effective in many years of active service.

★

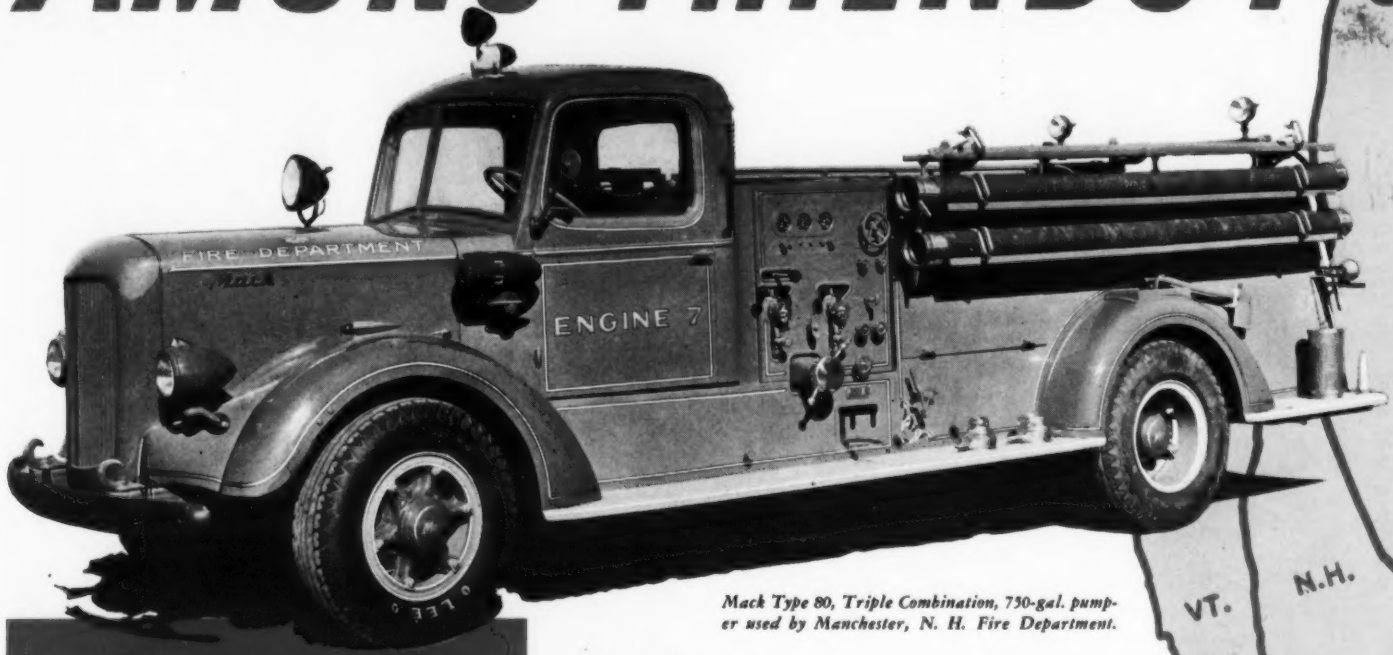
NOZZLES ★ SIAMESE
ADAPTER FITTINGS
ETC.

SAMUEL EASTMAN COMPANY, Inc.
CONCORD, N. H.

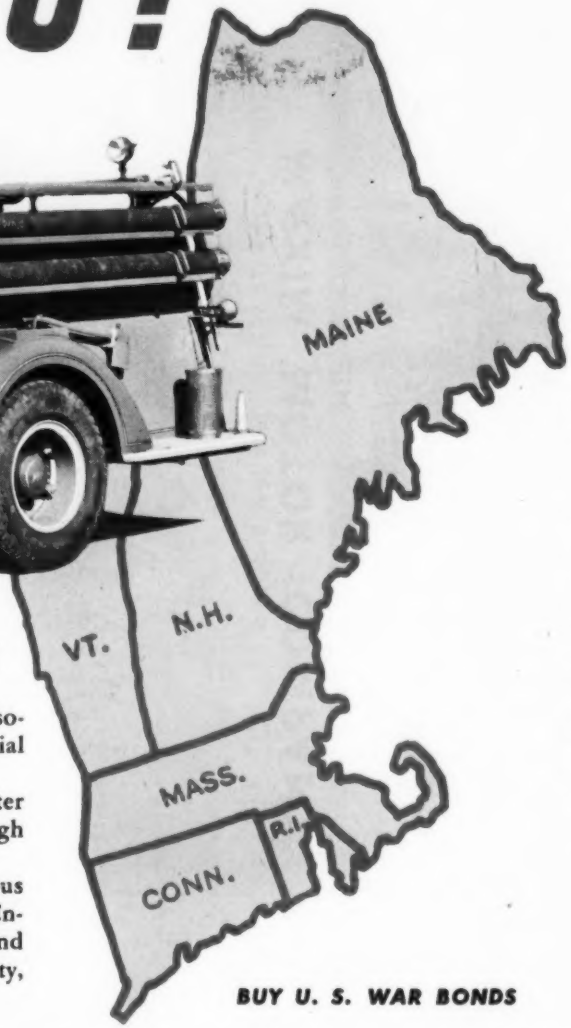
Please mention FIRE ENGINEERING *when writing advertisers*

MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION · EMPIRE STATE BUILDING · NEW YORK, N. Y.

AMONG FRIENDS!



Mack Type 80, Triple Combination, 750-gal. pumper used by Manchester, N. H. Fire Department.



Mack

FIRE APPARATUS

Mack salutes the meeting of the New England Association of Fire Chiefs, with a very real feeling of special friendship.

Nowhere in the country has Mack had pleasanter relations—nor greater popularity—than through New England.

Yankee common sense and shrewdness are famous the world around. Here at Mack we view New England's wide use of Mack equipment as a real and gratifying tribute to extra quality, extra dependability, extra worthwhileness that *make* a Mack a Mack!

BUY U. S. WAR BONDS

MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION · EMPIRE STATE BUILDING · NEW YORK, N. Y.

It will help if you mention FIRE ENGINEERING *when writing advertisers*

MAXIM

MOTOR FIRE APPARATUS

"New England's Own"

Traditional excellence of New England craftmanship is apparent in every piece of apparatus bearing the **MAXIM** *name plate.*

★

MAXIM MOTOR COMPANY

ERNEST MAXIM, *Pres.*

MIDDLEBORO, MASS.

When every second counts . . .

Only

AKRON BRASS

Makes the *Genuine* ROCKERLUG COUPLING with HIGBEE THREAD HIGBEE INDICATOR TAPERED STILL THREADS In brass or malleable iron, subject to Limitation Order 39.

SPECIFY GENUINE . . .

TRADE **ROCKERLUG** MARK
REGISTERED

COUPLINGS

★ Don't Gamble WITH SUBSTITUTES
★ Don't Gamble WITH HUMAN LIFE
★ Don't Gamble WITH PROPERTY DOLLARS
★ Don't Gamble WITH INEXPERIENCE

ACCEPT NO SUBSTITUTE

Our Trade Mark Protects You

AKRON BRASS MFG. COMPANY, INC. • WOOSTER, OHIO

AKRON BRASS
FIRE FIGHTING EQUIPMENT

© 1943 Great American Industries, Inc., Meriden, Conn.

★ I'm a Smoke Eater from 'way back ★

Many years ago, I drove a Ward LaFrance pumper to many a fire. It never let us down. Neither has the Ward LaFrance equipment we've bought since I became Chief. Today you've got to have an urgent need for fire apparatus to be able to get it — but since we've been buying Ward LaFrance pumpers exclusively for years, we can depend on the ones we have, for the duration and then some. I'm glad to hear Ward LaFrance is turning out big Tank-Recovery Wrecker units and fire trucks for the armed forces. That means our boys are getting the kind of equipment it takes to win a war.

P. S. *Ward LaFrance* is a name to remember after this war is won. It stands for *special trucks*, engineered and built for the job to be done. No matter what your requirements, you'll probably find custom-engineered and built trucks are the economical, efficient, profitable kind of vehicle to buy. It's none too soon to make preliminary inquiries concerning your future requirements. Our experienced engineers will welcome your letter.

WARD LAFRANCE TRUCK DIVISION

★ GAI GREAT AMERICAN INDUSTRIES INC ★

ELMIRA, NEW YORK

WARD LAFRANCE

CLARK DUPLEX

WHAT TO DO— *With a non-breathing Victim!*

IN CASES OF:

DROWNING:—Put the victim's head and chest below the level of his feet so that water will flow out of the mouth (don't waste time trying to empty water out of victim).

ELECTRIC SHOCK:—Carefully disconnect the live current.

GAS POISONING: (or Asphyxiation) Remove victim carefully into fresh air area.

THEN in ALL the above cases begin artificial respiration AT ONCE.

After making the victim as comfortable as possible, laying face down with one arm extended and the head resting on the other arm, apply the mask of a CLARK INHALATOR tightly over the nose and mouth. Prone pressure manual operation is required to assist in the breathing operation. If there is only one victim then only open one cylinder valve. CLARK INHALATORS can handle two victims as easily as one. Clearly visible indicators show the progress of the victim's breathing and enable the operator to tell at all times the condition of the victim. After recovery of normal breathing the patient should remain in a reclined position and a light stimulant should be administered.

The CLARK INHALATOR is so constructed as to absolutely prevent any chance for error in human judgment or lay-down on the part of the apparatus.

Send for free literature to convince yourself that the best is none too good in protecting the lives of the men in your department.

★

If it's a **CLARK** *it's a* **LIFE SAVER**

PHYSICIANS OXYGEN & HOSPITAL SUPPLY CO., Inc.

1390 Eastern Parkway . . . . . Brooklyn, New York

FOR SALE
SEAGRAVE GORHAM 750 GPM PUMPER 1913—in A-1 shape throughout. Passed Board of Fire Underwriters test at 800 GPM in 1941. Gorham two-stage Turbine Pump. 4 cylinder water cooled engine. $500 FOB. Capital Fire Equipment Company, Sacramento, Calif.
THIRTY YEARS OLD . . . AND STILL GOING STRONG
Advertisement from the May 1943 Issue of Fire Engineering

. . . *For* THIRTY YEARS

OTHERS HAVE FOLLOWED IN SEAGRAVE'S FOOTSTEPS

This little advertisement in Fire Engineering tells a big truth. It proves how right Seagrave was thirty years ago when it produced the first centrifugal pump. Here is a piece of Seagrave Apparatus that after almost a third of a century still meets the Underwriter's tests.

Seagrave was right thirty years ago and Seagrave is right today . . . Seagrave was right when it produced the first Centrifugal Fire Pump . . . Right when it produced the first Enclosed Pumping Unit . . . Right with the first Automatic Pressure Regulator . . . Right with the first Auxiliary Cooler for pumping engines . . . Right with the first All-Steel Aerial Ladder . . . Right with the first complete Hydraulic Aerial Ladder Control Mechanism . . . Right with the first All-Steel Bodies and Canopy Cab.

Yes, Seagrave has always been so right in its engineering and new mechanical developments that others have been forced to follow in Seagrave's footsteps.

THE
SEAGRAVE CORPORATION
COLUMBUS, OHIO
Bickle-Seagrave, Ltd.,
Woodstock, Ont.

SEAGRAVE

THE GREATEST NAME IN FIRE APPARATUS

Now!

SOLID FOG!

NO MOVING PARTS ADDED

NO HOLES OR EXTRA WATERWAY TO CLOG

Elkhart presents another great development in its famous Mystery Nozzle—the SOLID fog cone. This big improvement is achieved without the addition of any moving part and without any change in the basic design which has made the Mystery Nozzle outstanding in its dependability.

A series of Streamlined Teeth, integrally cast into the outer barrel cause deflection of 40% of the nozzle stream—entirely filling the cone and creating a *solid* fog!

Elkhart continues to point the way in the development of superior equipment—most of which today is produced for urgent war needs.

NOTE THAT TEETH DO NOT INTERFERE WITH SOLID STREAM

ELKHART BRASS MANUFACTURING CO., INC.

ELKHART, INDIANA

ALBI—firepel "S"

REG. U. S. PAT. OFF.

fire retardant coating

• • •

approved *by* Underwriters' Laboratories Inc.

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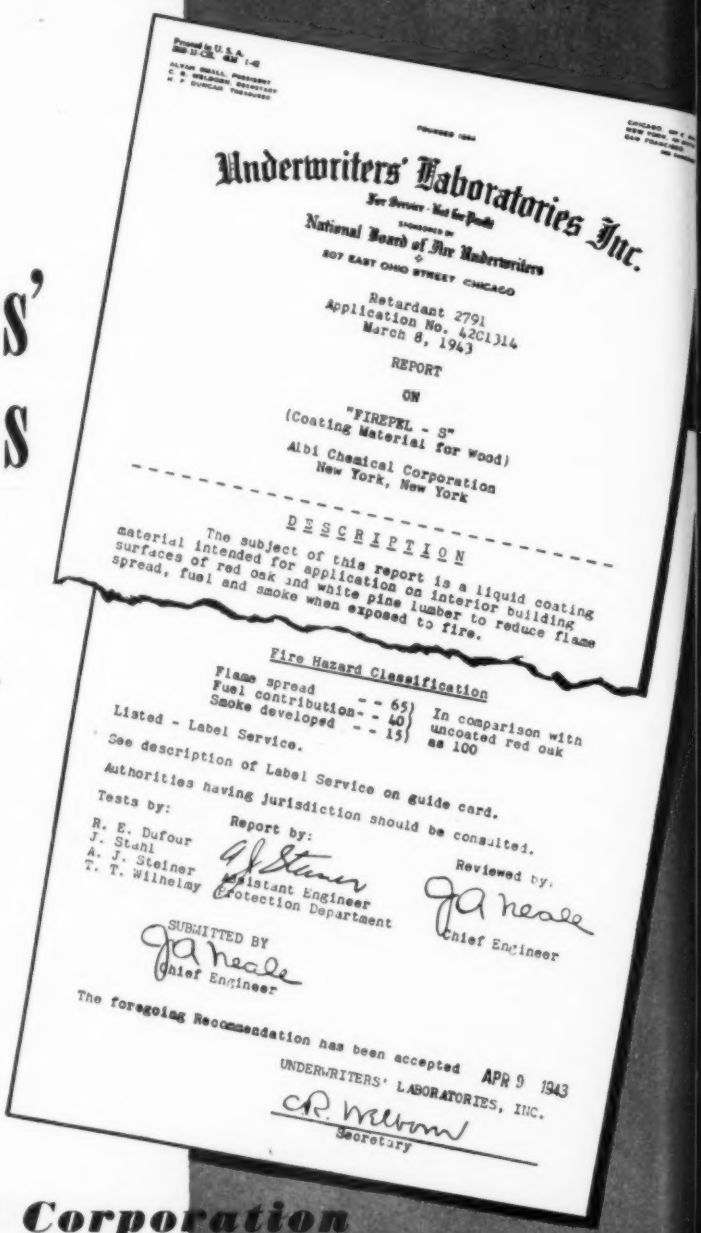
for protection against fire hazard

• • • • • •

for full information write



Underwriters' Laboratories Inc.
For Protection · Not for Profit
SPONSORED BY
National Board of Fire Underwriters
207 EAST OHIO STREET CHICAGO

Retardant 2791
Application No. 42C1314
March 8, 1943

REPORT
ON
"FIREPEL - S"
(Coating Material for Wood)
Albi Chemical Corporation
New York, New York

DESCRIPTION

The subject of this report is a liquid coating material intended for application on interior building surfaces of red oak and white pine lumber to reduce flame spread, fuel and smoke when exposed to fire.

Fire Hazard Classification

Flame spread -- 65 } In comparison with
Fuel contribution- -- 40 } uncoated red oak
Smoke developed -- 15 } as 100

Listed - Label Service.

See description of Label Service on guide card.

Authorities having jurisdiction should be consulted.

Tests by:
R. E. Dufour
J. Stahl
A. J. Steiner
T. T. Wilhelmy

Report by:
Assistant Engineer
Protection Department

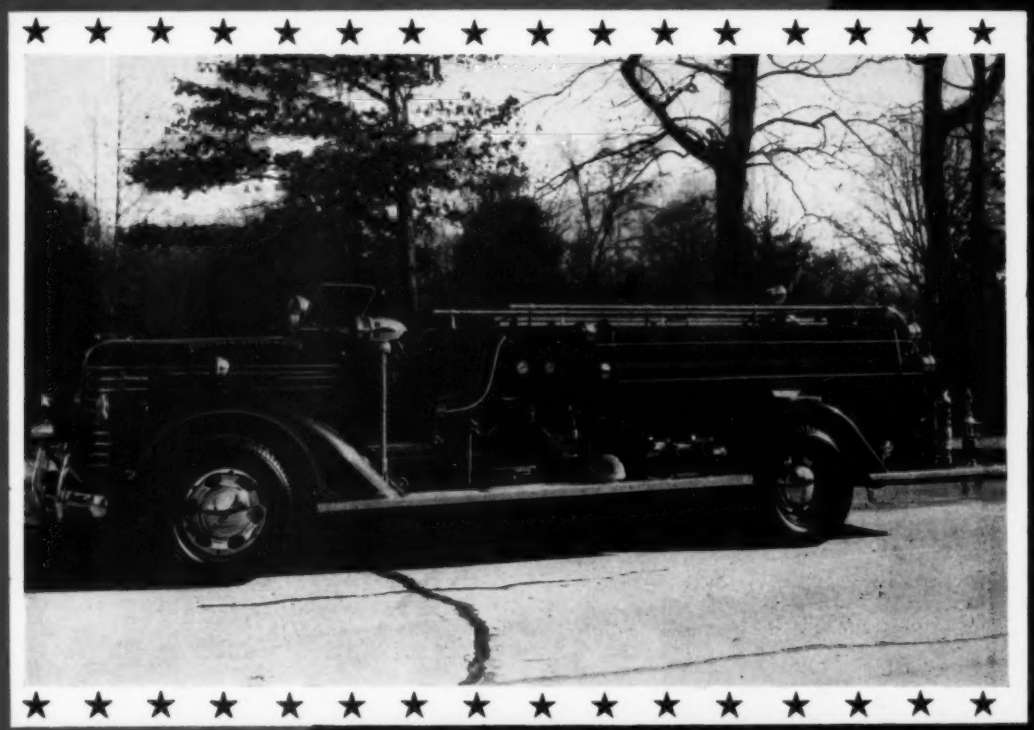
Reviewed by:
Chief Engineer

SUBMITTED BY
Chief Engineer

The foregoing Recommendation has been accepted APR 9 1943
UNDERWRITERS' LABORATORIES, INC.
Secretary

ALBI **Firepel Corporation**
9 Park Place • New York, N. Y.

MODERNIZE WITH OREN



MANUFACTURED BY

OREN

FIRE APPARATUS DIVISION

of Roanoke Welding & Equipment Co., Inc.
Roanoke Virginia

...—V...—

HUGE FIRE LOSSES IMPEDE WAR EFFORT

ENCOURAGE THE PROMPT USE OF FIRE ALARM BOXES

DELAYED ALARMS ARE CONTRIBUTING LARGELY TO THE APPALLING DESTRUCTION OF NATIONAL RESOURCES. Witness, the following few of many instances:

S. S. Normandie. ". . . a delay of 10 to 15 minutes between the start of the fire and the first alarm received by the fire department. The fire apparatus arrived in *90 seconds after the alarm was given.* The S. S. Normandie is reported to have cost $53,000,000.00."

Jersey City Waterfront Conflagration. Loss: $5,000,000.00. "There appears to have been some delay in sounding the alarm, estimated by City authorities at 20 minutes."

Warehouses. Loss: $1,000,000.00. "When the fire was discovered by the watchman the flames had already burned the telephone wires and he had to go a quarter of a mile to a railroad roundhouse to telephone the alarm."

Fall River Rubber Fire. Loss: $11,000,000.00 "The foreman's attempts to extinguish the fire with an extinguisher were futile. A delay of six minutes or more appears to have occurred."

Fire alarm boxes, adequately distributed, provide the most dependable means for calling the Fire Department. Deficiencies in Signaling Systems cannot easily be eliminated now, but greater safety may be achieved by the intelligent use of existing equipment.

THE GAMEWELL COMPANY
Newton Upper Falls Massachusetts

JUNE, 1943

FIRE ENGINEERING

VOL. 96. NO. 6

With the Editor

N.F.P.A. Advocating Federalized Fire Service?

At the recent convention of the National Fire Protection Association in Chicago, Horatio Bond, Chief Engineer of that organization, asserted that federalization of the fire service was coming, but, if for any reason this could not be attained, then state controlled fire service would be next in order.

What puzzles us is why any change at all is necessary. Aren't our fire departments under their present set-up doing a splendid job? Are not they qualified to handle such fires as may occur?

We can understand why England has federalized her fire service.

Under sustained enemy aerial attack it was found necessary to move large numbers of men and apparatus from one city to another of that small, highly populated country. Only federal control could accomplish this expeditiously. In addition some fire watchers, fire wardens and auxiliaries didn't hold their posts under heavy attack, and it was necessary to have a firm control over them.

Even the most pessimistic authorities here admit that the United States under present conditions cannot be subjected to mass bombings such as England experienced. There's a lot of difference between 30 and 3,000 miles of water which enemy planes must cross in order to attack.

At most, only nuisance, or token bombings, involving only a few planes, are held possible. And any American fire department, with its local mutual aid organization, can well handle any fires which may be caused.

Would federal control improve our fire service or make it more efficient?

We are certain it would not!

Federal control would very likely result in a situation similar to that of the postal service. Each change of national administration in the past has resulted in wholesale replacement of city and town postmasters, and it will likely follow the same pattern in the future.

Furthermore no national government, no matter how paternalistic, could know the fire protection needs and deficiencies of towns and cities as well as do the governing officials of the communities.

State control of the fire service would be just as obnoxious, just as unnecessary, as federal control. Louisiana, under the reign of Huey Long, provided a good example of what may develop from state control. Firemen were licensed by that state, and licenses had to be renewed every six months. If a license holder did not please the administration during the interim, the license was not renewed at the end of the six-months' period, and the applicant was out of a job.

We hold that the present system of municipal fire departments is best for this country; that no foreign-inspired scheme is needed, nor is it wanted by the thousands of capable municipal fire departments.

What puzzles is why the National Fire Protection Association should advance such a plan (we assume that Chief Engineer Bond speaks officially for his organization) which is so alien and so opposed to the American conception of municipal rights and responsibilities.

In the meantime the fire service had better be everlastingly alert to combat any attempts to put over centralized control (federal or state) of municipal fire departments.

Fred Shepperd

Munitions Ship Fire Endangers New York Harbor

By JERRY DALY

THE Port of New York, seething with war activities and bulging with invaluable war materials to say nothing about its priceless multitude of human lives, was seriously endangered by explosion on Easter Saturday evening, April 24, as it never had been since the Black Tom explosion of World War No. 1. The danger was an uncontrollable fire in the boiler and engine rooms of an oil burning munitions ship which was due to leave the following day. The vessel was towed from its Jersey City berth to open water in New York Bay by the New York City fireboat Fire Fighter and a couple of tugs. Providentially, it was sunk with niagaras of water before the heat of the blazing oil could sufficiently radiate to the cargo of assorted sizes and weights of block busting "calling cards" of destruction for our enemies.

Disastrous Explosion Feared

Army and civilian defense officials feared the explosion of the munitions ship with such serious apprehension that the New York Police teletype together with commercial radio stations warned all radio audiences in the Metropolitan area of New York to open all windows and then keep clear of them, lest the detonation attain holocaust proportions with inevitable appalling loss of life and destruction of millions of dollars worth of property, particularly those materials needed for the war.

How, where or when the fire started is not revealed. But at 5.30 p.m. a telephone call came to the Jersey City Fire Department from the Army Base Pier at the foot of Chapel Avenue to the effect that there was a fire in a munitions ship alongside the longest pier in the Port, extending for one mile from the Jersey City shore. Box 897 was sounded by the fire alarm operator, bringing three pumpers, two ladder trucks, a salvage wagon and Chief Otto Wagner. Firemen found the boiler room and engine room ablaze, with flames leaping to the superstructure. Time was the essence. Deputy Chief Richard Cullen rolled in and sized up the situation quickly. At 5:44 o'clock Chief Cullen ordered a second alarm which gave him three additional pumpers, one ladder truck, a tower, a high pressure wagon with two deck guns and three-inch hose. Fire Chief Frank J. Ertle responded, as did Deputy Director of Public Safety Edward A. Flaherty.

The Jersey City force endeavored as best it could to make some progress against enormous volume and intensity of the fire, but to no avail. To stay below for any appreciable length of time was just suicide.

Six minutes after the second alarm had been sounded, Roger Carmody, Supervising Fire Telegraph Dispatcher in charge of the Manhattan Central Alarm Station of the New York Fire Department was requested by Deputy Chief Cullen (speaking for Fire Chief Ertle) to send a New York fireboat. Asst. Fire Chief Arthur B. Wright, in charge of the New York Fire Department at the time, ordered the fireboat Fire Fighter, stationed at the Battery, to respond. Lieutenant Frank Huenfelder, commanding officer of the Fire Fighter, made a quick run across the Hudson. In the interim, two Coast Guard auxiliary fireboats assigned to the New Jersey shore had responded and the crews had gone to work aboard the blazing ship. The Coast Guard helped to stretch lines, etc. The Fire Fighter was soon alongside and the firemen worked fast and furiously.

Battalion Chief John J. Hurton of the New York Fire Department's Marine Division

At 6.20 p.m. the Jersey City fire alarm operator informed New York that the vessel contained munitions, as Chief Ertle ordered the vessel cut adrift to protect enormous war supplies and materials on the gigantic pier. The Fire Fighter with the aid of the harbor tug Ole Johnson and a couple of smaller tow boats started down the harbor, the tug boats hauling ahead and the fireboat alongside as it stuck to its task of flooding the ship enroute. It was about 7.30 o'clock when the fireboat John J. Harvey, which had automatically located at the Battery Station, was called to the fire by radio. The Harvey was in charge of Lieutenant Fred. Bahr. By this time the burning mnuitions ship was in the vicinity of Robbins Reef abeam of Bayonne, N. J.

New York Fire Department in Charge

The fireboat tender "Smoke" carried to the scene Battalion Chief John J. Lowery and Acting Division Chief John J. Hurton in charge of New York flotilla of ten fireboats. The "headache" now belonged to the New York Fire Department. With the Fire Fighter on the starboard and the Harvey on the port, the two most costly fireboats in the world were doing a dual job of flooding the munitions ship while towing her to a spot in New York bay where, if she did "blow," she would be in as spacious an area as could be found in a feverish hurry under the circumstances.

Any idea of extinguishing the fire by other than scuttling had been out of consideration from the very outset. Whether the ship's engineroom crew had tried to handle the fire before calling the Jersey City Department could not be learned. Some officers and men of the Jersey City Department courageously remained on board and assisted the crews of the New York fireboats to flood the vessel. Officers of the ship, officers and men of the U. S. Army Ordnance, as well as Navy and Coast Guard officials were also present.

Cargo Hatches Flooded

The Fire Fighter had twenty-four 3½-inch lines, without nozzles, flooding cargo hatches Nos. 4 and 5. The fireboat Harvey had seven 3½-inch lines, without nozzles, into cargo hatch No. 3. Hand lines were used to cool the deck situation generally while the open butts were spilling away into the holds. The pressure was maintained at 40 pounds. It was volume and not pressure that Chief Hurton had ordered to avoid any concussion or violence which might precipitate a medley of detona-

tions by which all concerned would have heard the angels sing in Davy Jones' locker.

It has been calculated that the two fireboats delivered in two hours about 3,946,880 gallons of water, of which the Harvey pumped about one-half a million and the Fire Fighter the balance. This volume of water weighed about 16,490 tons.

During the seemingly long and dubious ordeal through which brave men later admitted to thoughts of their God, their families and themselves, it was a case of "Praise the Lord and sink the ammunition!" Suddenly the ship took an acute list to starboard which threatened the security of the Fire Fighter. The fireboat's hawsers were severed with axes as the ship's cargo booms swung outboard. Anything that was not battened down began to spill on to the fireboat. She was eased off to safe distance but continued to pour water into the hazardous derelict.

As the ship gradually began to fill, the blazing oil level raised proportionately. The higher it came, the more oxygen it attained and hence the more fiercely did it burn and expand. There were some explosions of containers of powder on deck which, of course, intensified the apprehension about a major explosion which made all hands sort of resigned to their fate. Many of the containers with explosive powder were washed overboard. New York Bay became dotted with floating "mines." Chief Hurton radioed to station WNYF (New York Fire Department) from the Fire Fighter to ask the Coast Guard to send boats to pick up the floating hazards.

Nearby Residents Warned

At 8.30 p.m. the following was heard on all commercial radios:

"Police Emergency warning to all residents. Ship afire. Explosion imminent. You are warned to open all windows and then stay away from them."

When the burning ship was about a half mile northwest of Robbins Reef light, her decks were awash. All hands were forced to take to the fireboats and Coast Guard boats. Finally at about 9:00 p.m. the vessel foundered in about thirty-five feet of water, as deck pipes and rail pipes went to work on blazing oil which covered the area where the ship went down.

Army and Navy officers were exuberantly loud in their praise and gratitude for the bravery and tenacity of the officers and men of the fire service. The potential holocaust with its inescapable death and destruction was the worst scare thus far on the New York home front of World War No. 2.

The Navy Salvage Service has taken steps to raise the vessel. Jersey City officials have appealed to Congress to take any action to reduce the hazard to life and property of Jersey City. Seven of the major railroads east of Chicago have freight terminals in Jersey City. The City does a tremendous export business. On the other hand, spokesmen for our government say that Uncle Sam should not be hampered in the war effort. Persons caught smoking along Jersey City's waterfront or on its piers or ships are fined $200.

The Jersey City Fire Department has cited for honorable mention, Fire Chief Ertle; Deputy Chiefs Richard J. Cullen and Thomas J. Maloney; Battalion Chief Otto Wagner; eleven captains (Jersey City has no lieutenants) and fifty-four firemen for "outstanding heroism and devotion to duty."

The New York Fire Department's Board of Merit has for consideration a report by Assistant Chief Wright recommending the highest recognition for Chiefs Hurton and Lowery, two Lieutenans, two Pilots, six Engineers and fourteen Firemen.

PRIORITIES TO BE STRESSED AT I.A.F.C. CHICAGO MEETING

Fire Chiefs Will Have Opportunity to Discuss Problems with War Production Board Officials

WHILE many wartime topics will be included in the program of the annual conference of the International Association of Fire Chiefs, to be held at the Palmer House in Chicago, on August 31-September 3, particular emphasis will be placed on problems incidental to federal priority regulations.

George A. Cumming, Chief, Fire Defense Section, Governmental Bureau, and George W. Angell, Deputy Director, Safety and Technical Equipment Section will be on hand to review the functions of their respective offices, and to answer questions relative to priorities for fire apparatus, fire hose and equipment.

Civilian defense, too, will be given a lot of attention. On the program, from the Office of Civilian Defense in Washington, will be F. S. Gay, right-hand man to Dean James M. Landis, and Chief Roi B. Woolley, Chief of Fire Defense and Coordination Unit. The latter will describe federal plans for stimulating mutual aid between fire fighting organizations throughout the country.

Among the many technical subjects to be included in the program will be in a discussion on large caliber fire streams by Colonel Clarence Goldsmith, special advisor to the OCD. Colonel Goldsmith will review results of tests conducted on large fire streams by the Chicago Fire Department, in which he participated. Another interesting paper will be that by Chief Walter Stephen, of the Monsanto Chemical Company, Anniston, Ala., on the handling of electrical fires.

The proposed visit to the Underwriters' Laboratories will afford the delegates an opportunity to see how fire tests are made on building materials and equipment, as well as tests on fire fighting appliances. It is expected that fire hose tests also will be made.

The program of the Chicago conference promises to be one of the most outstanding ever set forth.

Scene of Destruction Caused by Explosions and Fire on the Loading Platform of the Air Reduction Corporation Plant

Exploding acetylene cylinders made the work of the firemen doubly hazardous by showering the neighborhood with "bombs." Note the tank in the foreground ripped wide open by the terrific internal pressure. One flaming cylinder rocketed through the air, striking a house a quarter mile from the plant, setting it afire. Three trucks and two automobiles near the loading platform were destroyed. Damage to the plant, located in Dorchester, Mass., and engaged completely in war production, was estimated at $250,000. Miraculously, the only casualty was one of the truck drivers who suffered slight burns on the arms and legs. Photo by Charles L. Hanson, Jr.

London Firemen's Spare-Time War Work

By JOAN LITTLEFIELD

DURING the blitzes of 1940 and 1941, members of the National Fire Service, both men and women, stationed in the London area were in Britain's front line as no civilians had ever been before. Their heroism and the dangers they ran have been brilliantly depicted in paintings and photographs by their colleagues—how they worked for hours, sometimes days at a stretch, the lives and treasure they saved, their uncomplaining, matter-of-fact heroism.

These men and women are still at their posts, which must be completely prepared for further heavy bombing of the capital. But although they keep up their drills and exercises and the routine work of their stations, they are not as busy as they used to be—not as busy as they feel they ought to be with a war raging.

Their comparative idleness, however, is a thing of the past. A few months ago they asked if they might do war work in their spare time. At first the authorities were doubtful. To maintain security was essential and nothing must be done to decrease the efficiency of the fire stations, but the men insisted that any work they did would be accomplished in their spare time, so they were allowed to have their way.

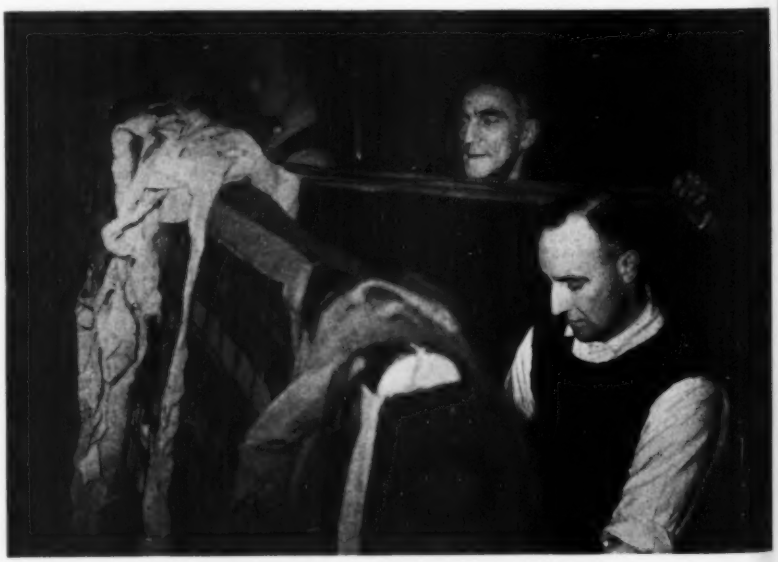
The scheme started four months ago, and now 150 stations in the London area are busy on ninety war contracts. Their production is eleven times greater than when they began and they now earn $2,400 a week. Fifty per cent of this money, less five per cent production costs, goes to the Treasury, and fifty per cent is used to improve amenities at the various stations. No fireman benefits directly from the work.

N. F. S. Men Are Shown Forging the Metal Which They Will Form Into Hinges for Hangar Doors

One London division recently completed seven million parts for airplanes—well under the factory time for the job. In East London alone stations assembled 5,000 bicycle batteries in a fortnight.

The other day I visited one or two of these fire stations to see the men at work. My first call was at a station by the river. Here the men are housed in what was once a city business men's club, built in the form of a ship, with cabins, bunks, and an excellent sun deck.

Here the men—and sometimes the girls as well—are planing and polishing paddles which will eventually be used in R.A.F. collapsible boats. Since fire exercises were in progress,



At a Fire Station A. F. S. Men Work on Camouflage Nets

Not all Britain's war supplies come from regular factories employing normal full-time staffs. The London and South Eastern Regional Board of the Ministry of Production recently held an exhibition of work by people from all walks of life, under all sorts of different conditions. Housewives' productions were shown side by side with those of firemen, shop girls.

only two men of the forty at this station were at work, but in the evenings there is a good muster at the benches.

"We like this work," a fireman told me, "because we know how the paddles help to save life. It stirs the imagination to know to what use they are put; and we hope soon that a pilot who has been brought down 'in the drink' will come and tell us his adventures."

Members of the services often visit these firemen and tell them how their work is linked with the fighting fronts.

The ground outside this station is not suitable for growing food, but the men have started to breed rabbits to help the war effort on the food front.

The next station I visited was in East London, where the biggest strides in production have taken place. The 130 men of the Mobile Corps who are billeted there must be prepared to go anywhere in England where there is a bad blitz, at a moment's notice. Their vans and equipment are always ready, their kitbags packed and forty-eight hours' rations stored for each man. There is also accommodation at the station, which before the war was a school, for any mobile detachments that might be brought to London if the capital were heavily raided.

Here about twenty men were sitting at a long bench busily engaged in the monotonous job of filing small plane parts with emery paper. They were cheerful and singing vigorously although they had been at this work for five weeks and confessed they would be glad when they were put on to assembling the parts. As they progress they are given more difficult jobs. Each man voluntarily puts in at least an hour a day, and a number of the girls take their turn, headed by an elderly lady who works as a civilian cook and spends much spare time at the bench.

At a station in West London, firemen and firewomen were at work on camouflage nets. Not more than twenty of them are ever able to work at one time, yet they make an average of thirty nets a week, the highest record for this type of work in the Fire Service.

Several of the men at this station have sidelines. One, an ex-watchmaker, mends the watches of his colleagues. Another, who was a shoemaker in private life, repairs their shoes, and a third—a member of the London Philharmonic Orchestra—plays chamber music with some of his firemen colleagues.

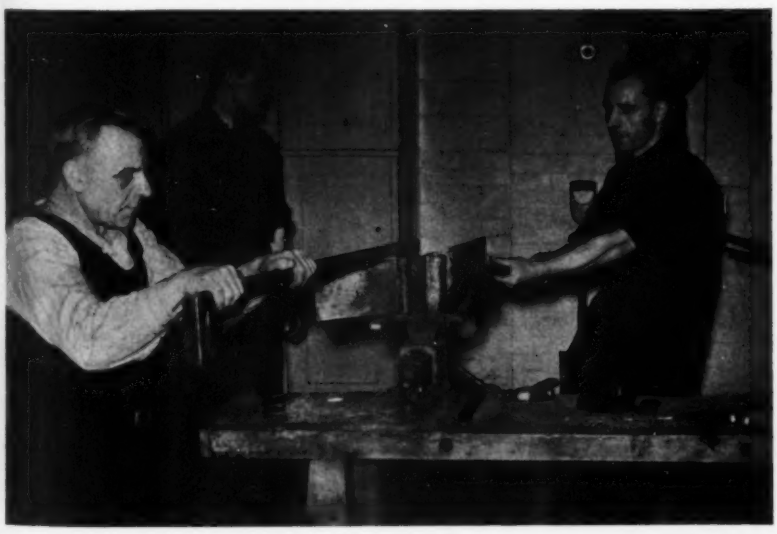
London's firemen and women are doing two war jobs instead of one—and doing them both well.

Article and photographs supplied by British Information Services.

Retires from Army

Staff Sergeant Leo J. Goguen of Fort Devens, Mass., former Chief of the Fire Department at Fort Ethan Allen, Vt., has been retired after twenty-one years of service for disability received in line of duty.

Sergeant Goguen has received a certificate from the Commonwealth of Massachusetts, Division of University Extension, having completed the course in Firemanship and graduated from the Drill School conducted under the direction of Chief Selden R. Allen of Brookline, Mass.



On Their Improvised Bench at Their Station N. F. S. Men Work the Metal They Have Forged Into Hinges for Aircraft Hangar Doors

V. C. Stanley Retires

The Gamewell Company has announced the retirement last month of V. C. Stanley, President, General Manager, and Director of The Gamewell Company, who has been continuously in the services of the Company and its subsidiaries in various capacities for the past forty years. He will be succeeded by Frederick B. Philbrick who will have completed twenty-three years of continuous service with the Company on June first of this year.

V. C. Stanley

Frederick B. Philbrick

Mr. Philbrick holds degrees of B.S. from Massachusetts Institute of Technology and of S.B. from Harvard University in Electrical Engineering. He early showed his interest and ability in the field of electrical engineering by working as a journeyman electrician at the Fore River Shipyard and for electrical contractors while obtaining his college education. Upon the completion of his services with the United States Navy, Mr. Philbrick was employed in the Testing Department of the General Electric Company at Schenectady, New York, and from there went to Massachusetts Institute of Technology for a year as an instructor in the Electrical Engineering Department. He entered the employ of The Gamewell Company in 1920 in its Engineering Department and had become Assistant Chief Engineer when he was appointed to be Pacific Coast District Manager in charge of sales in the Pacific Coast states, Alaska, Hawaii, which position he has occupied for the past fourteen years. His experience, it will be seen, thus includes well rounded periods of engineering and sales, as well as practical work in the electrical field and in the field of mechanical arts. Mr. Philbrick is forty-six years of age and a veteran of World War I in which he was a commissioned officer in the United States Navy.

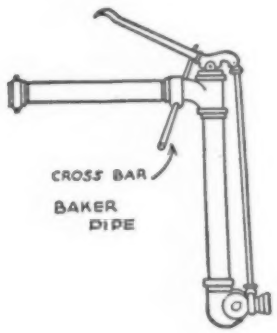
Practical Training for Auxiliary Firemen

By FRED SHEPPERD
Editor, FIRE ENGINEERING

IN this installment of the series of articles on "Practical Training for Auxiliary Firemen" are discussed fire hose fittings.

Q. Describe the Baker cellar pipe.

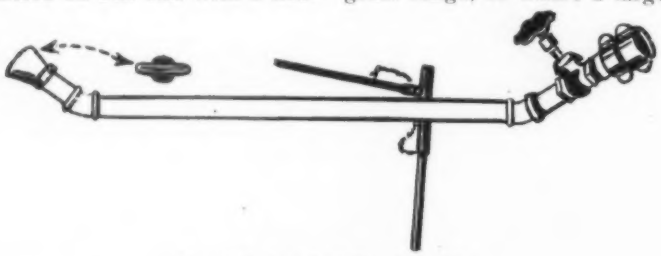
A. The Baker cellar pipe is somewhat similar to the Hart, with the exception that the method of controlling the stream differs. In



the Baker cellar pipe, control is secured by a rod which runs parallel to the vertical section. The nozzle may be raised or lowered by operation of the lever, or it may be swung around through a wide arc by use of the same lever. However, it does not rotate through 360 degrees.

Q. Describe the goose-neck (or bent pipe) type of cellar pipe.

A. The goose-neck, or bent, cellar pipe consists of a metal pipe which is bent to varying degrees. It is fitted on one end with a nozzle and on the other end with a valve. A cross bar provides a support for the pipe and enables the operator to elevate or lower the nozzle. The bent cellar pipe as usually found has two bends in it, each bend being about a third the distance from the end. The cross bar attached to the pipe spans the hole through which the cellar pipe is placed, and also holds the nozzle at the proper height so that it can be directed up or down by the movement of the bent pipe and hose attached thereto. It is used for the same purpose as the other cellar pipes, but is not as flexible as they in operation.



Goose-Neck or Bent Pipe Cellar Pipe

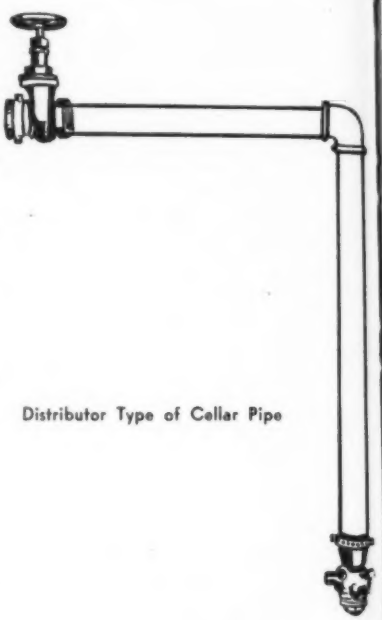
To secure a vertical deflection the hose attached to the pipe must be raised up and down while to secure a lateral deflection the hose attached to the pipe must be shifted to the right or left. Evidentally, it is impossible to get a very wide sweep of stream due to the necessity of moving the hose line to secure horizontal deflection.

Q. Describe the distributor type of cellar pipe.

A. The distributor type of cellar pipe consists of an L-shaped pipe fitted on one end with a valve and a hose connection and on the other end, with a distributor similar to the Bresnan distributor. No direction of the stream is required with this type, but the range is much less than with the Baker or Hart cellar pipe.

Q. When are large streams used at a fire, and for what purpose?

A. Large streams are used at a fire where it is necesary to have great range, or where a large volume fire must be brought under control. Large streams from monitor nozzles, deck guns, etc., are effective in covering exposures because of their range, their ease of manipulation, and the fact that they maintain their direction without application of manual force.



Distributor Type of Cellar Pipe

Q. What is the discharge from large nozzles at presures commonly employed?

A. The discharge from large nozzles at from 50 to 100 pounds pressure, which are considered satisfactory pressures for these streams, is as follows:

Nozzle Diameter in Inches	Nozzle Pressure in Lbs. Per Sq. In.	Discharge in G.P.M.
1½	60	517
	70	558
	80	596
	90	633
	100	667
1¾	60	704
	70	761
	80	813
	90	862
	100	909
2	60	920
	70	994
	80	1063
	90	1128
	100	1189

Incidentally the production of a large stream frequently requires

the output of more than a single pumper, as will be noted from the table of discharges.

Q. What particular precautions should be taken when operating large streams?

A. Large streams should not be permitted to remain stationary after they have performed their work. They may accomplish the cooling down of a fire in a few minutes, and thereupon their direction should be shifted to prevent unnecesary water damage.

Q. What is a deluge set?

A. A deluge set is a combination pipe holder and nozzle, attached to a short length of large diameter hose. On the inlet end of this hose is a siamese fitting, permitting two, three or four lines to be attached to this set. The siamese connection may be provided for either 2½, 3, or 3½-inch hose. Short section of large diameter hose may be 3, 3½, or 4-inch, depending upon the size of the nozzle and the size of the inlet connections on the siamese. A jumbo size deluge set is provided with four 3-inch inlets and one 4-inch outlet with a short length of hose and provision for using nozzles up to 3-inch in diameter.

The siamese fittings are of the clapper valve type, so that in the event that one of the lines bursts, coupling blows out, or line otherwise opens up, the set will not be put out of service.

Q. What is the purpose of the deluge set?

A. The deluge set is used for fighting fires which have attained considerable headway and where it is necessary to deliver a powerful street stream or roof stream from a point a considerable distance from the fire. Deluge sets make it possible to throw such streams at high pressures, and relieve the firemen of the dangerous and difficult job of holding the nozzle.

Q. What is a deluge gun, and for what is it used?

Deluge Gun

A. A deluge gun is a portable nozzle fitted with control equipment an siamese connection. As commonly supplied, there are three inlets to the siamese connection, and the nozzle is double swivel, permitting full 360 degree horizontal and 180 degree vertical swing of nozzle. The base on which the nozzle is placed is usually provided with spiked feet, or braces, to secure a firm support.

The deluge gun is used for the same purpose as the deluge set, namely, providing heavy streams from street or other points onto a fire.

Q. What is a nozzle holder, and for what purpose is it used?

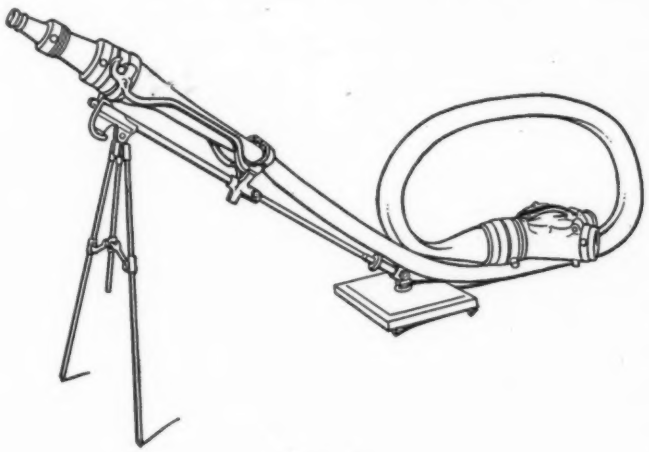
A. A nozzle holder is a device for handling a nozzle when in operation. It consists of the framework, or cradle, into which the hose is securely locked. Attached to this cradle is a "stick," or metal leg, to provide a secure footing on the ground or other surface.

This holder is used to provide a support for hand line, particularly when operating under high pressure. On some types of holders, special hooks are provided which permit fastening the line on ladder rung, over cornice, or other point of support.

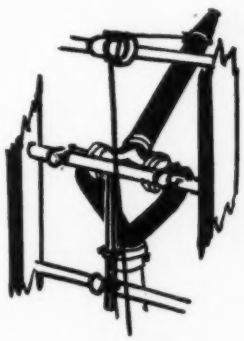
Q. What is a ladder pipe, and what is its use?

A. A ladder pipe is a swivel nozzle, provided with fittings by which it may be attached to the rung of an aerial ladder. This pipe may be controlled directly by hand, or provided with a rope for directing vertical angle of stream from the ground. Horizontal angle control is accomplished by revolving the turntable of the aerial ladder.

The purpose of the ladder pipe is to enable the fire department to provide a stream from an elevation, which is more effective in penetrating the upper stories of buildings than a street stream.



Deluge Set



Ladder Pipe

Nozzle Holder

COLLEGE FIRE BRIGADE SET UP UNDER CIVILIAN DEFENSE PLAN

Amherst College Fire Brigade Fully Equipped Cooperates with Civilian Protection School

By Robert L. Jordan*

HOW Amherst College came to be possessed of a homemade, but entirely effective, fire engine and a reconditioned hook and ladder truck, as well as a trained company of fire fighters, chiefly students, is a story of Yankee ingenuity and enterprise that is causing other institutions to ask questions and listen attentively when the answers are given.

Engine No. 1 Built by Deputy Chief Burrows in His Barn

Amherst had already created an Emergency Committee long months before there was any real thought of this country ever becoming involved in the "Foreign War" that was raging at the time.

Twice within the space of five years a natural disaster had swept into the Connecticut Valley causing heavy property damage and suffering. First, there was a serious flood that made necessary the evacuation of a greater part of the population of Hadley, then there was a hurricane. Both times President Stanley King of Amherst College had called upon Professor Lloyd P. Jordan, Director of Intercollegiate Athletics, to take over and to head up Amherst's part in the restoration and handling of the situation that was necessary. Both times Jordan and his men had had to start from scratch.

During the summer of 1941, Professor Jordan and the Assistant Dean of the college, Richard MacMeekin, were thinking serious thoughts and laying serious plans for taking care of such emergencies. They thought and talked of what had happened and what might yet happen. The result of those talks was a rough plan for what has since come to be called the Amherst College Emergency Committee.

The first meeting of the Committee was held on January 31, 1942, and one short week later the college was equipped to handle speedily and efficiently all the manifold problems of civilian defense. A system of air raid wardens had been set up. First aid classes were in session. The plans of the college buildings that had been obtained with an eye to their possible use as refuges for evacuees showed at a glance which were best adapted to use as air raid shelters.

It was at this point that Ted Bacon, a senior from Springfield, came to the Committee with a suggestion. It was, simply, that a student fire department be included in the plans. That suggestion was the start of an undergraduate organization that has come to be of the most interesting and popular in the entire Emergency Committee set-up.

Bacon was one of those boys who had always been fascinated by the screech of a siren and the flashing rush of the huge red fire engines. Since he was a Springfield, Mass., boy, it followed almost naturally that he knew Chief Herbert Root of the Springfield Fire Department. It was only a few days later that Bacon and MacMeekin, who had been appointed to head up the new department of the Committee, were on their way to talk to Chief Root. From him they learned just how to go about the task that they wished to accomplish and also what they would need if they could obtain it.

Fire Department Trained Men

Back in Amherst again, Bacon and MacMeekin continued to lay their plans and prepare for the job ahead of them, using the information supplied by Root as a basis for their work. The Amherst Fire Chief, Harold Warner, was contacted and agreed to take over the training of the undergraduates who were interested in the new department. Warner gave the students an introductory course in the fundamentals of fire fighting, drilling the boys one night a week at the local fire station. After a few weeks of this preliminary work, he turned the group over to Deputy Chief Burrows of his staff and Burrows continued the work. The Deputy Chief continued the work begun by Warner, drilling the students in the more advanced intricacies of the smoke-eating trade and familiarizing them with the equipment at the disposal of the local department.

From the time that the first announcement of the proposed college fire-fighting unit was made, it proved one of the most popular branches of the entire Emergency Committee. It became obvious that the membership would have to be

Engine No. 2, the Ladder Truck Which Was Remodeled Under Burrow's Supervision and Here Driven by Deputy Chief Markert of the College Company. Men Pictured on the Truck Are All Students in Company No. 3

*Amherst College undergraduate; member of college press.

limited in some way and yet it was equally apparent that the boys best fitted for the job should be included. Each applicant was given the Army Air Corps physical test and the twenty-four men who ranked highest on the basis of those tests were included in the new department. To Ted Bacon went the honor of being the first student fire chief in the history of the college.

During the spring came the first of the fires that have plagued the Civilian Protection School, located on the Amherst College campus. It was a bad blaze and it was put under control only with difficulty. From that incident MacMeekin saw that more than just a well trained group of men was needed. If the college fire fighters were to be really effective, they needed a fully equipped truck and trained men to take part in their weekly demonstrations. The town department had been helping out, but having on and sometimes two of their engines and a group of their men out giving a demonstration seriously weakened the effectiveness of their force.

Fire Truck Needed

It was obvious that the college group needed a truck, but how and where was one to be obtained. Buying one was almost out of the question. In the first place there was the terrific expense involved to be considered and even if the money could be raised where could an engine be purchased? Fire engines just were not for sale, not to colleges. It looked for a while as if there would not be an engine.

Burrows of the local department said that he knew enough about fire apparatus to build the machine if he could get the materials. This was an understatement inasmuch as he had already built three for the town fire department. MacMeekin had talks with President King and Herbert Johnson, the college comptroller, and it was decided that they could get the parts for Burrows.

Then there began one of the strangest searches that any of the three men, Burrows, MacMeekin, and Johnson, had ever had a part in. Together, in pairs, and singly, they haunted the secondhand auto marts and junk yards of Western Massachusetts in search of materials. At one place they found the chassis of a 1½-ton Chevrolet truck. Little by little the truck began to take shape as the hunt went on. A piece of scrap iron here, an old fender there. Headlamps, running boards, brass fittings, all were gathered together and incorporated into the growing truck.

The finished product is a triple-combination with a 500-gallon skid unit, mounted crossways on the chassis behind the cab. The hose body has a capacity for 1,500 feet of 2½-inch hose and 300 feet of 1½-inch hose. In addition, the truck is equipped with a 100-gallon booster tank, 200 feet of booster line, and carries a 24-foot extension ladder and a 16-foot roof ladder.

While the search and construction was going on, another fire involving the college broke out. This time it was in one of the rooms in the old North Dormitory. The fire was on the top floor and, while the local firemen handled the situation very effectively, it was apparent to all who saw them in action that, if the fire had gained headway and gotten out of control, they would have been hampered in their efforts by the lack of sufficient ladders to reach the blaze.

Once again, Burrows, Johnson, and MacMeekin went into a huddle. They decided that the truck then building in the Burrows' barn should be augmented by the purchase or construction of a ladder truck. Once more the question of where and how raised its head. This time, however, they had a little more luck. It was learned that down in Quincy, Massachusetts, there was a second-hand ladder truck for sale.

The three men went down to have a look and talk business. The truck that they found was a 1928 model and just a bit on the old-fashioned side, but after one look Burrows decided that it could be used and advised the two men to snap it up if they really wanted a ladder truck. The modernization process took place for the most part in the college shop. During the remodeling process, a 125-gallon booster tank with a 100-gallon-a-minute pump replaced the small chemical unit which formerly had been mounted behind the driver's seat. The pump not only services the booster but can be used at a hydrant with a 1½-inch line. A hose bed with a capacity for 500 feet of 1½-inch line has been mounted under the ladder bed at the rear of the truck. To facilitate reloading, the hose bed rolls out beyond the ladder rack and clear of the frame. Although the ladder bank has been lowered, its capacity has been enlarged to include two additional ladders. The truck now carries one 45-foot extension ladder, one 40-foot extension ladder, three 30-foot extension ladders, one 20-foot roof ladder, and one 18-foot roof ladder. In addition to hose, ladders, and booster line, the usual first aid equipment and various and sundry implements, including four salvage covers, are carried in the compartments and racks mounted on the ladder bed. Much of the equipment is new and was added to the piece after it was purchased.

By the end of the summer session both engines were ready for service. The first student fire department in the history of Amherst College had a well-trained staff of twenty-five men and two flashing red fire wagons.

Today, both trucks are kept in the Amherst Garage, ready to roll whenever they are called upon. The college staff has been cut to sixteen students to make room for a permanent group of eight additional men recruited from the college Buildings and Grounds force.

Cooperation With OCD School

With the Civilian Protection School under the Chemical Warfare Service, it is not difficult to make provision for realistic drills at regular intervals. Three field demonstrations a month are provided on the school's testing grounds for its students. In March, the one thousandth graduate received his diploma certifying that he had completed the course. Students from police departments, fire departments, various branches of the Army, and personnel of the Office of Civilian Defense have been coming from all over the eastern seaboard to take the various courses offered in this unique institution. Fires resulting from high explosives, incendiary bombs, oil bombs, the effectiveness of poison gases, either resulting from fires or used by the enemy, are studied in great detail. These demonstrations have continued through the winter months and the college Fire Brigade has been on hand for each demonstration.

Through Colonel Hall, the school's director, it has been possible to give these college firemen actual training under extraordinary conditions. Although there has been much discussion about the new anti-personnel bombs which have replaced the old magnesium and thermite units, very few firemen have ever had the opportunity of seeing one explode in front of them and then be required to face it with a good stream from a 1½-inch line. Fortunately, the Brigade has not been called upon to save life or property on the college campus. However, it rolls out regularly, three times a month, for a two-hour workout on a dozen bad fires at the school's testing ground.

Deputy Chief Markert and Student Chief Agnew Attending to a Solidified Oil Bomb with a Rockwood Fog Applicator

SAN FRANCISCO AUXILIARIES AMONG BEST EQUIPPED

Auxiliary Equipment Financed by Bond Issue; Working Agreement Made with Taxi Cab Company

By Bob Greenock

SAN FRANCISCO'S wartime fire defenses have been greatly augmented in recent months and the city's fire fighting forces are now in a position to combat with a good assurance of success fires caused by incendiary bombs, according to information released by Fire Chief Albert J. Sullivan.

Much auxiliary equipment has been purchased by the city with funds voted at a special bond issue election. This equipment, together with the comparative dribble that OCD has assigned, makes for a comparatively imposing array of apparatus and, by the same token, puts San Francisco far ahead of most cities in the country in amount of apparatus available in event of enemy attack.

The regular city department, consisting of forty-seven engine companies, sixteen trucks, twelve chemical or water tank companies, two fireboats, a rescue squad, four water towers, two searchlight engines, three boat tenders and five high pressure hose wagons, as well as miscellaneous equipment, has been augmented by readying for instant service a number of relief pumpers, trucks, chemicals and hose wagons.

These extra pieces of equipment have been distributed around the city and can be manned by the off-shift in a short time after the sounding of an air raid alert.

Most imposing, however, is the amount of auxiliary equipment now in service.

Working Agreement With Yellow Cab Company

And, newest and biggest step in providing auxiliary fire protection is a working agreement with the Yellow Cab Company of San Francisco whereby more than 350 Yellow Cabs have been equipped with the ball of a ball-and-socket towing device. The sockets are already affixed to 336 trailer pumps.

When an alert is sounded, the elaborate telephone and dispatching system of the Yellow Cab Company is used to order the cabs to the nearest auxiliary or regular firehouse where they stand by for further orders. No sirens sound until the "red" (raid or, at night, blackout) signal is given so cab drivers would have no way to know an alert was on. But with all cabs contacting their headquarters through the intricate phone system as soon as they are empty, many of them can be contacted in a short space of time. One cab driver passes the word on to another and before sirens sound, cabs are ready to transport trailer pumps and men to the fires. With the sounding of air raid sirens, all cabs are ordered to report for instructions.

The 336 trailer pumps already in service are of the conventional 500-gallon-per-minute type, have a ring towing device as well as the socket to fit the ball used by the cabs. The ring allows auxiliary self-powered engines to tow the trailers for all self-powered auxiliary pumpers of conventional design are equipped with a towing hook.

The trailer pumps each are equipped with suction hose and 400 feet of 2½-inch hose. At the present time they have been distributed to regular and auxiliary firehouses in the city. Those that have not been distributed yet are kept in a "pool" at the Fire Department Drill School, centrally located in the high value section.

At present there are twenty-seven auxiliary houses in service, thirteen more are being built, contracts for an additional ten have been let. Plans call for a total of 150, or about three to each of the fifty-two regular houses the city has.

Present auxiliary houses each provide room for from three to five units, trailers and self-powered trucks. Some of the houses to be built will house as many as seven units. The auxiliary houses are and will be located in public parks, schoolyards and on lots owned by the Fire Department or other city departments. Each house is connected with its control center by phone.

In addition to the trailer pumps, the city has 136 self-propelled auxiliary pumpers, each carrying a skid-mounted 500-gallon pump, 500 to 1,000 feet of 2½-inch hose, a 12-foot roof ladder, a 22-foot extension ladder and other minor equipment. Ninety of these truck-mounted skid pump units have been placed on the "stand-as-you-drive-it" type of truck, usually used by milk, bakery or laundry companies. The remainder are conventional design 1½-ton trucks.

Also located in San Francisco are two forestry trucks assigned from the State Division of Forestry fire equipment pool. They are specially assigned to the Sutro Forest-Mt. Davidson area in the heart of the city and are specially equipped for forest fire work.

These units carry not only the usual 500-gallon pump and 2½-inch hose but a 350-gallon water tank as well and 1½-inch hose, special tool and devices for forestry work. The water from the tank can be used while the suction is being attached. There is plenty of room for a large crew to ride and the trucks are equipped with seven speeds forward, enabling them to do everything but climb a tree.

Along the waterfront are more of the city's trailer type pumps (not included in the 336) manned by the special fire battalion of the U. S. Coast Guard.

The Coast Guard augments the city fire fighters inland when requested to do so and also mans a number of fire boats and fire barges located at strategic intervals around the Bay.

OCD Trailer and Skid Pumps

In addition to equipment now in service the city has ninety-five trailer pumps from the OCD and ninety-five skid-mounted or front-mounted pumps to be delivered. Because the OCD trailer pumps have steel tires, fire officials are hopeful of obtaining trucks on which to mount the pumps. The trailers would then be turned over to the Red Cross for emergency work.

The subject of having the cabs tow auxiliary pumps was first broached to the Fire Commission by Chief Sullivan. The commission put its stamp of approval on the idea immediately and Chief Sullivan then approached J. A. Baldi, chairman of the board of the Yellow Cab Company.

Mr. Baldi offered full co-operation and said the company welcomed the opportunity to be of service to the city. The company went on to prove its sincerity by spending $4,500 of its own funds to reinforce the back bumpers of the cabs and to install the towing balls provided by the city.

Chief Sullivan, commending the company for its public service, said:

Trailer Unit Attached to Yellow Cab

Left to right are: J. H. Helms, Civilian Defense Chief; J. A. Baldi, Chairman of the Board of the Yellow Cab Company and Chief A. J. Sullivan of the San Francisco Fire Department.

"San Francisco is the only city in the country so far advanced in the field of auxiliary fire protection. It is the only city that has a comprehensive arrangement such as we have with the Yellow Cab Company, and the only city where the citizens were so alert to the dangers of incendiary bombs that they voted adequate funds to provide necessary fire fighting equipment."

Manpower Situation Serious

Biggest problem now is to solve the auxiliary fireman manpower problem. The ranks have been decimated by the draft, shifting of manpower to work in war plants. When Pearl Harbor came 15,000 men signed up with Civilian Defense for service as auxiliary firemen. Apparently many thought all they had to do was to sign up and thus express a willingness to serve if and when the time came. They didn't realize, apparently, that auxiliary firemen must be trained and trained well.

At any rate only a third of that number showed up to take and complete the training course. At the present time about 2,000 men are really active.

To combat that lethargy and to renew interest of the city in this most important of all Civilian Defense activities, Battalion Chief George F. Schaefer and Captain William Murray have been detailed to take charge of the auxiliary firemen and equipment by Chief Sullivan.

At the present time a city-wide competition of all auxiliary companies is planned and already the auxiliary firemen are "boning up" for the final competition, at which time winners in the competitions held in the eleven battalion districts will meet.

The final meet will be held either in one of the two stadia in Golden Gate Park or at Fleischhacker Pool, largest outdoor pool in the world. Prizes in the form of trophies donated by public-spirited citizens will be awarded.

Capt. Murray is working out rules for the meet and evolutions to be performed.

Volunteers Give City New Truck

Citizens of Madison, Ill., were presented with a new fire pumper, the gift of the members of the Volunteer Fire Department. The entire expense of the pumper was paid by the volunteers and the presentation included paid-in-full receipt.

Financially the Madison Department is one of the most prosperous in Illinois. The volunteers own a building, partly used as a motion picture theatre, rent a garage to the city and the quarters on the second floor are also rented. Income provides the department with funds to operate and otherwise assist the city.

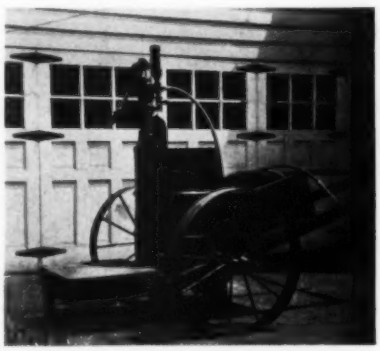
Members of the department, under the leadership of Fire Chief Bruce Champion and President Joseph Bergrath, decided to make the purchase to improve the fire fighting facilities.

In addition to the gift of the pumper, which is a 500-gallon machine, the volunteers have purchased for the city during the past six years 600 feet of 2½-inch hose, a fifty-foot extension ladder, 200 feet of 1½-inch hose, the firemen's uniforms and rubber goods.

The fire department consists of twenty men, four of whom are now in the armed services.

Air Raid Wardens Build Fire Engine

The great urgency for equipping the armed forces has made it practically impossible for Civilian Defense units to acquire equipment involving critical materials. Consequently much improvising has been necessary. Such an improvised unit is the fire engine built by the air raid wardens of Post 46, Upper Darby, Penna. It consists of a Myers double acting house force pump mounted on a fifty-five gallon steel drum and equipped with a pair of farm wheels with drop axle. To the pump has been added an



Cost of This Homemade Outfit Was $45.00

air chamber made from a two by six inch pipe nipple and cap. This acts as a cushion and enables the wardens to force a steady stream of water through ¾-inch garden hose over the top of a three story house. The supply of water carried in the drum lasts about thirty-five minutes.

Among the advantages claimed for this improvised outfit are: Low Cost—$45.00 complete with 200 feet hose and nozzle; perfect balance; can be operated by a woman or child and taken over lawns or curbs.

The Civilian Defense Corps of Collingdale Borough, Pa., have also mounted a number of these same pumps on steel drums and trucks. The trucks are those used at filling stations to cart transmission grease to the rack. These "fire engines" have been equipped for towing behind a car.

Abstract from "Myers Water Way," Vol. 15, Nos. 5 and 6.

Auxiliary Firemen of Easthampton

Easthampton, Mass., has a group of forty auxiliaries ranging in age from twelve to fifty, who meet every Sunday morning rain or shine with Chief John J. Lynn. Each and every one of the men are thoroughly trained to protect life and property in all types of safety work, whether it be scaling the ladders, taking people out of windows and down ladders or laying suction lines to brooks. They have become familiar with all the department's equipment with the exception of operating the machines.

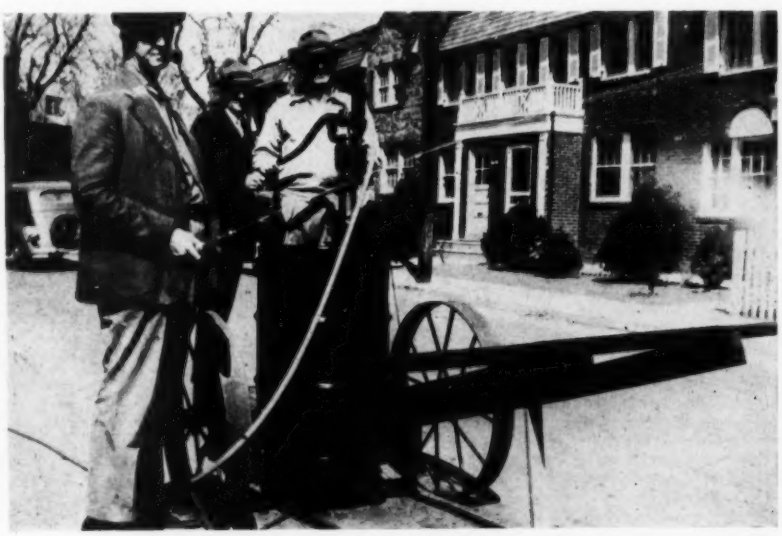
The men are equipped with white hats and badges, the first consignment of a $10,000 grant to the town from the government, which will include considerable fire fighting apparatus which is expected to arrive shortly.

The auxiliaries are on twenty-four hour call in the event of a serious fire in the town. They are taking the place of callmen who have entered branches of the armed forces or who are working in out-of-town defense plants.

The auxiliary firemen are given permission to ride the trucks whenever they go out on a run, but that depends on the number of men at the station at the time the call is received. If there are over five auxiliaries present when the call comes in, they are not permitted to ride the trucks excepting if it is a bell alarm.

Chief John J. Lynn has bought a 1936 model hearse and has had it rebuilt into an ambulance. The ambulance is stationed at the Central station and is capable of holding three victims. It is driven by a permanent man and every time it goes out, a police officer is dispatched to help the fireman.

Leonard Martin



Air Raid Wardens of Post No. 46, Upper Darby, Pa., and Their Homemade Fire Engine

NEW CRASH TRUCK TESTED ON IMPROVISED PLANE FIRE

Using Fog as Extinguishing Agent Fire Was Put Out in Six Seconds; Military Men Observe Performance

BEFORE a gathering of military men, representatives of aircraft factories, airlines, fire fighting experts and consuls of allied nations, a new airport crash truck, designed for the Army Air Forces put out a simulated airplane fire in six seconds at a demonstration at Santa Fe Springs, California, recently.

An Enveloping Cloud of Water Fog from the Bumper and Outrigger Nozzles Extinguished Fierce Gasoline and Oil Fire

The crash truck was designed for the experimental laboratory of the Army Air Forces at Wright Field, Dayton, Ohio. It is a product of the Yankee Motor Bodies Corporation of Los Angeles.

All types of fires and varying conditions were included in the demonstration. Many of the events were repeated several times at the request of the representatives in order that they could recheck certain features.

Gasoline Fires Extinguished

Gasoline and oil fires were used principally for they are regarded as about the most difficult to combat. The length fo time it took to extinguish these fires ranged from a low of six seconds to as long as seventeen seconds.

The procedure followed by this airport fire crash truck in battling aircraft fires starts with fighting the blazing plane with water fog through two nozzles mounted on the front bumper as the plane is approached. These nozzles will each discharge 45 gpm at 100 psi.

As it closes in on the burning plane, the mechanically operated outrigger nozzle mounted on the truck's cab focuses fog down on the plane. This nozzle discharges 54 gpm at 100 psi. The rescue crew jump out of the truck and enter the plane throwing an enveloping cloud of water fog ahead to protect themselves and the plane's crew until the rescue is completed. These ½-inch applicators discharge 15 gpm at 100 psi.

The maximum rated capacity of the pump is 250 psi, but the pressure commonly used is 150 to 200 psi. It is powered by a Ford-Mercury 100 h.p. auxiliary gasoline engine, which is used so that the pump can be operated while apparatus is in motion.

To meet any emergency that may arise, the crash truck is fully equipped with such things as knives with serrated edges to release the pilot, gas masks, burn spray kit, life belts, inhalator, metal snips, forcible entry tool, heavy duty axe, electric cable cutters, metal cutting saw, electric cap lamps, fire blankets, rubber blankets, stretchers, floodlights, and many other emergency and life saving equipment.

The airport crash truck may be used anywhere pilots and planes are operating for it is designed to maintain its 1,200 gallons of water at 40 degrees temperature at 40 degrees below zero.

Serving Aircraft Industry

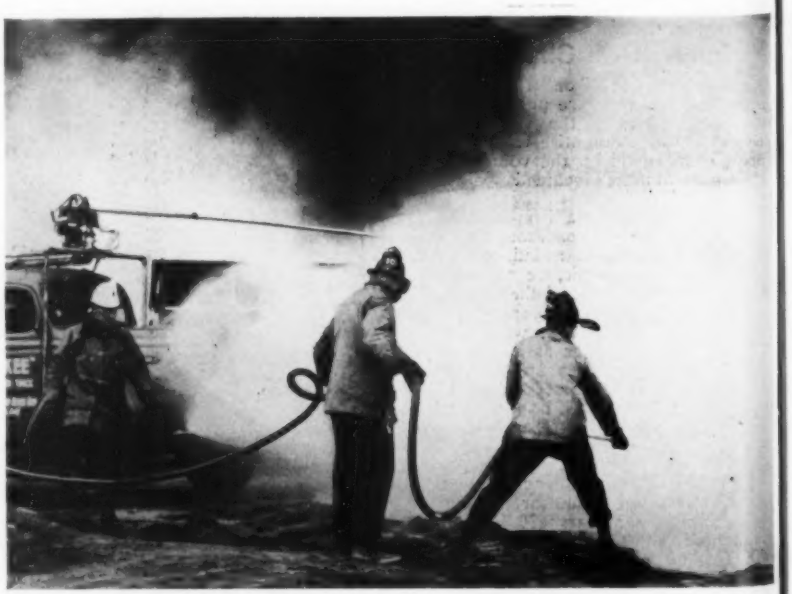
Among the aircraft manufacturers using these fire and crash trucks to protect their pilots, planes and equipment are Douglas, Vega, Consolidated and North American.

The truck shown has already been used for a real fire. A four-motored bomber approaching the field radioed that a fire had begun around gasoline tanks in the right wing. The crash truck stood by, met it at the end of its landing roll and extinguished the flames in approximately two minutes, with minor damage to the airplane.

Another time an experimental model caught fire at this field and also was saved with negligible damage. The savings was especially noteworthy in this instance, because of the cost of rebuilding a hand-made experimental design is, of course, many times the cost of a production line airplane.

Timothy Stillman in Service

Timothy G. Stillman, well-known fire buff, is now a member of the armed forces. He is attending armament school at Lowry Field in Denver, Colo.



Six Seconds Later This Simulated Roaring Airplane Fire Was Extinguished with Water Fog in Demonstrating the Newly Designed Airport Fire Crash Truck

Fort Tilden Fire Department Breaks Record

Recently before a group of Army inspectors, Chief Leonard Genovese took the apparatus and members of the Fort Tilden, N. Y., Fire Department to the dock and made a running stretch of 150

Fire Chief Leonard Genovese

feet, hard suctions connected, pumps started. It took sixty-one seconds to make the proper connections and five seconds to obtain water from a depth of fifteen feet. The total time was sixty-six seconds, beating the previous record held by a British Fire Brigade by twelve seconds.

The members participating in this feat were driver-fighter Al Mele, T. Belli, N. Andrews, N. Chandanais and J. Intrabartolo.

Besides the post, the members look after the fire protection of nineteen outside installations.

Chief Genovese, who heads up the department, is a veteran of twenty-three years service in the New York Fire Department. In 1939 he retired to enter private employment. In 1940 he felt the urge to again enter the fire service and was made assistant chief at Fort Tilden, becoming Chief shortly after.

He is a student of the City Managers Fire Administration Course and a graduate of New York University's Wartime Fire Protection and Fire Prevention Course.

Electrical Map Presented to Washington Department

An electrically operated map of the city for use in war emergencies or at the time of large fires, constructed by members of the Friendship Fire Association, was presented to Chief Stephen Porter and the Fire Department recently at the Fire Department Transfer Office, 637 North Carolina Avenue, S.E. The map was the gift of the Association, an organization of prominent business and professional men of Washington, headed by Dr. Edward R. Gookin, who banded together three years ago to form the city's first fire buff club. At the beginning of the war they all became members of the Auxiliary Fire Service.

After the presentation speech made by Dr. Gookin, the map was unveiled by his daughter, Carroll Brent Gookin, and Chief Porter responded with a short speech of acceeptance, expressing his thanks for the gift and commending the Association on its public spiritedness.

The map is designed to aid the Fire Department on the receipt of multiple alarms. Each fire company is represented on the map by a light. As companies respond to a second, third or greater alarm, their corresponding lights are turned off, darkened areas appear on the map and sections of the city without fire protection are readily perceivable. Chief of the Transfer Office Clement Murphy, or Captain Harold F. Harding, the Transfer officer, then proceed to "reshuffle" the companies remaining in service. By telephoned orders, they transfer companies represented by the remaining lights into areas which have been darkened, thus equalizing the city's fire protection.

The map was the idea of the Association's secretary, Roy A. Wiseman, who took the matter up with Fire Department Executive Officer Captain Carlisle Peterson. Peterson received the idea enthusiastically and assured Mr. Wiseman that such a map would be of great value in time of big fires or war, if an attempt were made to bomb or burn Washington. With such approval, Mr. Wiseman discussed the matter with other members of the Association, the project was speedily approved, and construction was started under the direction of Arthur W. Clime, Jr., Welfare and Recreational Association manager. Many technical difficulties were experienced and much of the needed electrical equipment was not obtainable due to war shortages. One by one, however, these obstacles were overcome under Mr. Clime's guidance, and after some three months, involving 197 man-hours of work on the part of various members, the map was pronounced completed and ready for service.

In addition to Association members, Dr. Gookin, Chief Porter, and Chief Murphy, Fire Department officials present included Captain Carlisle Peterson, Executive Officer; Captain Harold F. Harding, Transfer Officer; Sergeant J. E. Hartwell, of the Fire Department Office; and Sergeant Walter Watt and Privates J. Curtis Varah and George R. Lyles of the Transfer Office.

Western Massachusetts Fire Chiefs Club Formed

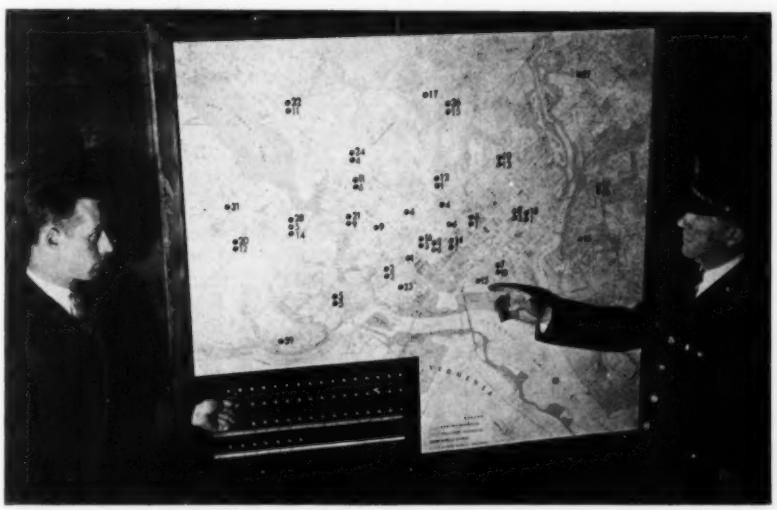
The fire chiefs of Western Massachusetts have organized the Western Massachusetts Fire Chiefs Club.

The first meeting was held at fire headquarters in Westfield, Mass,. at which the following officers were elected: President, Chief John Tracy, Great Barrington; Vice-President, Chief Errie M. Burnett, South Hadley Center; Treasurer, Chief Harold E. Warner, Amherst, Secretary, Chief Albert Bunyan, Chicopee; and Directors, Chief Roy S. Turton, Shelbourne Falls; Chief John Lynn, Easthampton; Chief Milton C. Baggs, Belcherton and Chief Oscar R. Hutchinson, Lenox.

The western Massachusetts district which this club represents is composed of 110 cities and towns, of which seventy are actively represented. Rationing of tires and gasoline has prevented a larger membership.

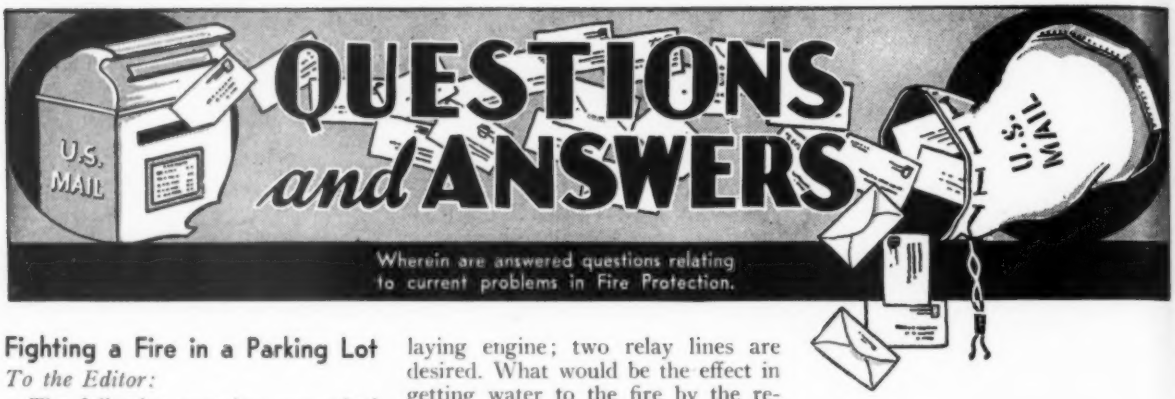
Meetings are held the second Tuesday of each month in the fire stations of the various cities or towns represented. It will take over nine years to have meetings in all of these cities and towns. The purpose of the club is to exchange ideas, get acquainted with all of the chiefs and their departments and also to promote an educational program for the fire service. This will be of very great help in carrying out the Governor of Massachusetts' proclamation whereby all cities and towns in the OCD regions are to be in a position to help other cities and towns from the border of Vermont to the border of Connecticut.

CHIEF ALBERT BUNYAN.



Trying Out the Electrical Map Recently Presented to the Washington Fire Department by the Friendship Fire Association Are Captain Harold F. Harding and Arthur W. Clime, Jr.

By means of lights representing each engine and truck company and chief in the city, controlled by the switches on the panel at left, Captain Harding is able to have a visual picture of the companies remaining in service at the time of a multiple alarm. Guided by conditions as shown on the map, he then redistributes the in-service companies to equalize the city's fire protection.



Fighting a Fire in a Parking Lot

To the Editor:

The following question was asked at a recent examination for fire lieutenant:

"Assume that you respond to a fire which has involved an automobile located in a parking space containing 500 other cars. The automobile is completely involved and the gasoline tank has ruptured. You respond on a bell alarm. State in detail how you would handle this fire until it is extinguished. Assume that you are in command; the superior officers are engaged at another fire."

Will you kindly express your opinion as to the manner in which this question should be properly answered. L. S.

Answer: It is always difficult to offer answers to problems involving fire fighting operations, for each city and each civil service commission has a different idea on the subject.

To bring an automobile fire under control, such as described in your letter, the first step would be to get a fog nozzle in operation to cover exposures and to kill the main body of the fire. Carbon dioxide extinguishers would help in finishing off the blaze.

If it is possible to move the cars in the immediate vicinity of the burning car, this should be done promptly. However, cars in lots may frequently be locked and you must assume the worst condition.

The use of a good fog stream will not only check the spread of the fire, but will also cool down the gasoline tank and thereby slow down the burning of the gasoline. If properly applied, it may even extinguish the blaze and prevent reignition.

Relays

To the Editor:

What would be the effect in regard to getting water to the fire in a relay where the relaying engine has no fitting by means of which water from the source of supply can be delivered to the intake of the pump and is connected to one of the discharge outlets, on the supposition that enough water will be supplied the pump (centrifugal) for some of it to be relayed to the fire?

A fitting is available for connecting one line only to the intake of the relaying engine; two relay lines are desired. What would be the effect in getting water to the fire by the relaying engine if the second relay line is connected to one of the discharge outlets on the supposition that enough additional water will be supplied the relaying engine to supply its needs and reduce the friction loss in the relay layout by the use of two lines? C. C.

Answer: It would not be practical to hook the feed line from the first pumper to the discharge outlet on the second pumper. Nothing would be accomplished with this arrangement. No pressure would be developed by the second pumper.

When such a situation as described is encountered, an improvised catch basin may be placed at the end of the hose line from the first pumper, and the second pumper can take suction from this catch basin. In this way there is little lost in the way of pressure.

Where two lines are stretched from the first pumper to the second, and only one inlet is provided on the pumper for attachment of lines from first pumper, a siamese connection should be used on the single inlet. To this siamese connection may be attached the two lines from the first pumper.

It would be impractical to attach one line to the suction intake and one to a discharge outlet, as there would be no benefit to be accomplished by the second line. The second line attached to the discharge outlet would hinder, rather than help, the performance of the second engine.

Friction Loss Rule

To the Editor:

I shall appreciate your clearing up the rule of friction loss which reads, "Pressure does not affect friction loss unless it increases the velocity of flow." J. J. P.

Answer: The statement you question might be explained as follows:

If a line of 2½-inch hose is carrying 300 gallons per minute, the friction loss will be 21.2 pounds per hundred feet. The figure will be the same for every 2½ line carrying the same amount of flow, irrespective of the pressure within the line. For example, if the pressure in the line were 100 pounds per square inch, the friction loss for 300 gallons per minute would be exactly the same as where the pressure were 200 pounds per square inch in the line.

However, if we increased the pressure and in so doing increased the nozzle pressure and therefore the rate of flow, we would naturally have higher friction loss for the higher flow. But as long as the flow remains constant, the pressure in the line of hose has not any bearing upon the friction loss.

Friction Loss in Small Hose

To the Editor:

Will there be more water discharged from an open butt of a ¾-inch booster line 250 feet in length connected to a 1-inch outlet on a pump than if it were connected to a ¾-inch outlet on a pump and the same pressure at the pump?

A fire company had 250 feet of ¾-inch booster hose connected to a ¾-inch connection at the pump, and a vapor nozzle attached at the end. The results were very poor at 80 pounds engine pressure.

Another company having a 1-inch connection on their pump with 200 feet of ¾-inch booster hose used the same nozzle and had better results.

Would the difference in results be caused by the extra fifty feet of ¾-inch hose or obstructions in the hose like poor gaskets protuding at the couplings? P. H. M.

Answer: We believe the inability of one of the ¾-inch lines of hose to give satisfactory pressure while the other gives workable pressure on a fog nozzle is due to the greater length of one of the line.

You can appreciate this upon reviewing the following figures for friction loss in ¾-inch hose.

FRICTION LOSS ¾-INCH HOSE

Flow in G. P. M.	Friction Loss 100 ft. R. L. Hose
8.4	10.
10.0	13.5
12.5	20.
15.0	29.
17.5	38.
20.0	50.
22.5	62.
25.0	75.

Thus if the nozzle were discharging but ten gallons per minute, the friction loss in 500 feet of hose at this flow would be 67.5 pounds.

If the pressure at the engine is 80 pounds, only 12½ pounds would remain at the nozzle to provide discharge.

If 400 feet of hose were being used and the flow was 10 gallons per minute, the friction loss would be 54 pounds, and the pressure at the nozzle would be 80 — 54, or 26 pounds.

While we have not used the 200 and 250-foot lines you have given us, we have used larger figures for the length of line in order to emphasize the friction loss factor.

If the flow is greater than the 10 gallons per minute, the difference in nozzle pressure will be even greater.

The size of connection at the engine would have negligible bearing on the drop in pressure.

OCD Apparatus Mounted on WPA Trucks

The 275 skid-type pumpers sent to New York City early in January by the Office of Civilian Defense for use by auxiliary firemen in extinguishing fires caused by enemy bombs are now in service.

Originally it was planned to mount the pumpers, capable of delivering 500 gallons of water a minute, on regular Fire Department apparatus, but this proposal had to be abandoned when it was found that the weight of the units was too great for the fire trucks.

Sixty trucks bought by the city for use by the local office of the Works Progress Administration were returned to the city, after having been used to cart away furnishings and records of the defunct WPA. At the same time it was decided to remove the bodies and motors of some Police Department patrol cars which had outlived their usefulness and to use the remaining parts as a carriage to carry the pumpers.

After the body and the motor of each patrol car was removed, a pumper was welded over the axles thus making a mobile unit. It will be necessary to pull these units either by man power or by another vehicle. It is expected that taxicab drivers who volunteered for emergency duty with the Police Department taxicab corps will be asked to pull these units with their cabs.

Getting the use of the trucks was a big help. All that was necessary to be done to turn the pumpers into fire fighting units was to mount the pumpers on the rears of the trucks.

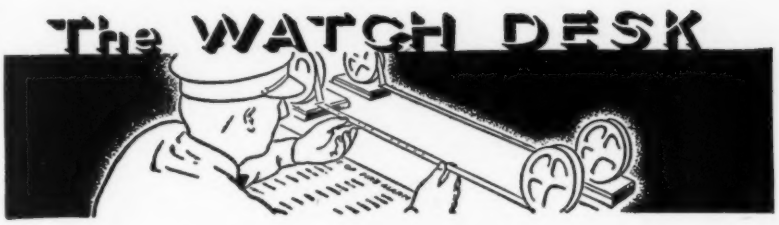
Thomas Bracken Dead

Thomas C. Bracken, Treasurer of the Connecticut State Firemen's Association, died on May 13 at his home in Branford, Conn., after a lengthy illness. He was sixty-five years of age and a native of New Haven where he served as a member of the Board of Fire Commissioners for sixteen years.

At one time Mr. Bracken served as President of the New Haven Board of Aldermen and also was New Haven county Vice-President of the State Firemen's Association and Chairman of its Legislative Committee.

While on the legislative committee Mr. Bracken was instrumental in having many laws enacted in the State Legislature of benefit to Connecticut firemen. Fire officials from all parts of the state attended his funeral

THOMAS F. MAGNER.



Our inquiring reporter overhauls the firemanic news of the day

Bouquets to Muscular John Koruda

The man on the flying trapeze had nothing on stalwart 53-year old John Koruda, Jersey City (N. J.) who swung four persons to safety from a third-story window when fire swept a rooming house. Those saved were Mrs. Jean Hilton, her 9-months old infant, and her husband, and John Guida, who was preparing to jump 45 feet to the pavement, when he was saved.

Mr. Koruda was asleep in a bedroom of an adjoining building to that afire, when his daughter discovered Mr. Hilton leaning out the window to escape the flames. He swung his leg out the apartment window; straddled the window sill facing Mrs. Hilton, then, as his daughter held his other leg, he reached across the 4-foot alleyway and took the baby. This done he locked hands with Mrs. Hilton and swung her across, and lifted her into his apartment. He repeated the operation to save Mrs. Hilton's husband, William, 34, and then got Mr. Guida. Bravo!

* * *

Believe It or Not!

Here's one for the record! Smoke poured from a house just half a block from No. 1 fire station in Topeka (Kans.). Yet the Brothers had to watch from the firehouse while fellow fire fighters from a crosstown station quenched the flames! Cause? The man who brought the alarm to No. 1 station turned the knob of an automatically locking door the wrong way—and, firemen and equipment were penned inside! Well, if you don't believe it, it isn't the fault of several of our correspondents, all of whom sent the same clipping!

* * *

Chief Gets Service—and How!

Out in Baker (Ore.) the fire department is allus on its toes, so we are told, but they put on an extra burst of speed they day they responded to an alarm from 2958 Campbell Street. That's the home address of Fire Chief Otto Karg! The department wiped out a roof fire in good order.

* * *

Old, But Still a "Ripley"

Glass ornaments on a purse, Mrs. Dillard Hicks of Hobart (Okla.) discovered, can be dangerous. She smelled something burning while automobile riding with her husband. They stopped the car and investigated. Mrs. Hick's purse was on fire! Hot sunlight shining through convex glass ornaments on the purse caused the blaze! Now don't tell us "green" backs don't burn!

* * *

Squab Dinners!

In Kansas City bells clanged, and firemen dashed to the Frank L. Williams residence. They knocked out a $700 blaze—then found 50 pigeons in the attic dazed by smoke. Mr. and Mrs. Williams, grateful, gave the birds to the Brothers—for dinner! And no ration card needed!

* * *

Hot Off the Tape

New York City had 300 brush and grass fires in five days. One, in Staten Island, necessitated a three-alarm assignment which destroyed 2 frame dwellings and blackened 250 acres. There oughta be a law! . . . In Columbus (O.) thirteen-year-old Glenna Thompson walked into a fire house clutching her wrist. *"I think its broken,"* she said, and asked for help. She got it—plenty: a first-aid class was in progress in an adjoining room. . . . Alert telephone operator, Mrs. Julia Tobey, Lackawanna (N. Y.), is credited with saving seven lives. She intercepted early morning call from a woman having difficulty in speaking, learned the caller's address and that family was being affected by fumes, and summoned a fire department rescue squad which brought seven persons around after two hours work. . . . John T. S. Clark, Fresno (Cal.), middle-aged church trustee, was charged with attempting to slay his wife by hurling a jug of gasoline on an electric heater in bathroom where she was taking a bath—also with setting fire to his house. . . . A New England contrib' sends us belated story from Boise (Ida.) about Tommy Hawkins, 14, who, emulating Santa Claus, got stuck in a chimnew of an outdoor fireplace, and hadda have the Brothers cut him out. . . . Another story of unusual F. D. rescue work comes from Ashville (N. C.) It's about "Honey," the cow who climbed two flights of stairs to get into the fodder loft above her stall and ate so much she was too big to negotiate a turn in the stairway, coming down. The Brothers were called and had to knock a hole in side of barn and extract Honey by that route. . . . When four boys, 9 to 15 years old, used their sweaters to beat out a park grass fire in Kansas City which they hadn't started, the Park Board formally presented 'em all new sweaters—and thanks! . . . In Guthrie (Okla.) excited voice on fire phone called *"The bus station's on fire!"* Firemen answering the call found no blaze and finally learned it was a long distance call from Langston, several miles away. Un huh—the Langston bus station was destroyed. . . . The second worst fire hazard in Salt Lake City (Utah) is said to be the city's Public Safety Building—*the worst, according to* the Utah Building and Construction Congress, *is the Salt Lake City central fire station!* . . . Thomas A. Donovan, 46, fireman driver of a battalion chief of St. Louis (Mo.)

(*Continued on page 327*)

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

ADVANTAGES AND DISADVANTAGES OF STEEL HELMETS

THE discussion in this round table is a continuation of that which appeared in the May issue of FIRE ENGINEERING on the advantages and disadvantages of steel helmets.

The generous response from our readers made it necessary to carry the discussion over to this issue.

Readers are invited to send in their comments on this subject or on next month's subject, which appears in the box on the following page. Address communications to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York, New York.

HERE IS THE PROBLEM

What is your opinion of the steel helmet (of the type furnished by the OCD) for use by professional firemen?

What, in your estimation, are the advantages and disadvantages of this type of helmet?

Which type of helmet do you feel is most satisfactory for professional fire department use?

Discussion of the Topic

A. C. DuRee, Chief, Long Beach, Cal.: The steel helmet (as furnished by the OCD) for use by professional firemen as a deflector of metallic objects such as flak and shrapnel appears to have considerable merit, but as a normal head protection device for fire duty alone, it is not satisfactory. The disadvantages are that they are too heavy, do not have sufficient apron at the rear to prevent hot ashes and water from running down the neck. The helmet sets so low on the head that the accoustics are bad as the metal reverberates any spoken sound or other noise, making it difficult for the wearer to hear. The cushioning in the steel helmet is not constructed to absorb shock from heavy objects.

I favor the helmet made from bakelite or other similar material with reinforced rim and ribs. These helmets are lighter in weight, insulated against electrical contact, well ventilated and the head straps are cushioned. By actual experience I have witnessed heavy objects fall from seventy to a hundred feet, striking a fireman's helmet and knocking him down without any ill effects to man or helmet. I do not know what deflecting ability this type of helmet would have against flak or shrapnel.

Albert J. Sullivan, Chief, San Francisco, Calif.: It is my opinion that the steel helmet is intended for protection against shrapnel, bomb fragments, anti-aircraft shells, etc., and as such will probably be very badly needed during actual enemy attacks.

In conventional fire fighting it has no advantage over the regular fire helmet excepting that the latter is very difficult to obtain at present. Its main disadvantage is the fact that it offers very little protection against water.

The regular fire helmet is unquestionably far superior for fire fighting where there is no shooting going on.

S. T. Green, Chief, Gadsden, Ala.: The OCD type helmet is too heavy and is not constructed correctly for fire department use as the padding or adjustment straps would not hold in case of a large timber or brick falling in on a fireman fighting a fire.

The Cairns new regulation low type helmet is the best, in our opinion, for regular fire fighting duty.

J. Ludie Croom, Chief, Wilmington, N. C.: I do not like the OCD type helmet because it is too heavy and has no watershed. We use the M. S. A. composition helmets.

John F. Moroney, Chief, Meriden, Conn.: For war emergency use the OCD type helmet would be satisfactory, but not for fire fighting. It is too heavy and clumsy for fire duty and has no advantage over the present type.

We use an all-leather helmet which weighs 1½ pounds.

Thomas R. Hartnett, Chief, Racine, Wis.: We believe the steel helmet is very dangerous near electric wiring. We use the leather or bakelite helmets.

Claude Osborn, Chief, Decatur, Ill.: I believe the brim on the steel helmet is too narrow in the rear. It may stand a harder blow from falling debris but will not protect far enough down on the neck and shoulders. We feel the Mine Safety helmet is the most satisfactory for professional fire department use.

Joseph L. Murphy, Chief, Kingston, N. Y.: I believe the steel helmets are too heavy for use by professional firemen.

The leather helmet is the most satisfactory for fire department use, and these, in my opinion, could be made lighter.

L. B. Barnum, Chief, Phoenix, Ariz.: I don't believe the steel helmets are safe. In case of contact with hot wires, the firemen are apt to be electrocuted. They are uncomfortable and too hot.

We feel the plastic (M. S. A. helmet) is the most satisfactory for professional firemen.

Chris Smith, Chief, Muskegon, Mich.: I do not think the steel helmet is the proper type for regular firemen. It is too heavy and too cold in bad weather.

The bakelite helmet made by the Mine Safety Appliances Corporation, is the best in my judgment.

Frank Bennett, Chief, Durham, N. C.: E. L. Mathews, Chief, Tuscaloosa, Ala., and Henry L. Hilles, chief, Tucson, Ariz., felt that they were not qualified to give an opinion on the subject for they are not familiar with the steel helmets of the OCD type.

C. C. Styron, Chief, Atlanta, Ga.: I would not recommend the type of helmet used by the OCD for the professional fireman.

The advantage of the helmet is that it will stand a heavier blow than the regular fireman's helmet because of its construction, but it is heavier, causing pressure on the head. It is a conductor of heat and would create a great life hazard around wires.

I consider the leather or fiber helmets more satisfactory for fire use.

L. A. Moore, Chief, Fresno, Cal.: Our opinion of the steel helmet is that it might be used in an actual air raid but should not be used under normal fire fighting conditions.

Under bombing conditions the steel helmet would prevent the men from being injured by bomb fragments, but under normal fire-fighting conditions its excessive weight and the fact that it absorbs and holds heat makes it unsuitable.

We favor the New Yorker firemen's helmet with low type head angle.

H. Abbot Griffin, Chief, White Plains, N. Y.: My opinion of the steel helmet is that it is too heavy for regular firemanic use. A comparison of weights reveals that the steel helmet is thirteen ounces heavier than the regulation leather helmet.

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Bunker Pants

Bunker pants equipped with removable wool lining, sturdy construction, reinforced crotch for pole sliding. These pants, together with coat as illustrated at left, is Midwestern's combination suit No. 101.

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I do not believe that it is practical. This helmet will not stay put unless the chin strap is used. It provides no protection to the neck and ears in cold weather.

It is also a conductor of electricity. The helmet provides a cushion, but in my opinion, this is not sufficient protection in the case of a falling live wire or contact with charged materials.

I prefer the leather helmet for fire department use.

E. F. Reed, Chief, Middletown, Ohio: I do not believe that the steel helmet of the OCD type are suitable for fire department use.

They are too heavy, too shallow and are not the proper shape. They have a tendency of allowing the water to run down the neck of the fireman wearing them, and do not provide the necessary protection.

I believe the old type standard shape helmet is the best. Leather helmets are safe but heavy. Aluminum helmets are very light and the most comfortable. I believe they are preferred by most firemen because of their light weight and the modern lining which keeps the helmet on the head. Fiber helmets are heavy and not as comfortable, but I believe are safer from an electrical contact standpoint. They have equivalent protective features.

W. J. Taylor, Chief, Burbank, Cal.: I do not approve of the steel helmet of the type used by the OCD, mainly because of its weight. This type helmet weighs nearly a pound more than the new improved MSA type helmet. Due to the construction of the head gear, its wearing qualities are not good. The rim of the helmet is not wide enough to prevent water and debris from flowing down the firemen's neck. It also does not afford protection from heat should it be necessary to approach a hot fire.

I believe the new improved MSA type helmet is most satisfactory for fire use.

A. L. Headlough, Chief, Fire Protection, Plum Brook Ordnance Works, Sandusky, Ohio: I have examined the helmet issued to auxiliary firemen by the OCD and do not believe that such a type helmet is suitable for the professional fireman. The OCD helmet is very heavy and has no protection against hot water and sparks for the neck. It will not stay in proper position on the head when bending over. It does not give enough vision in front for fire fighting. There is too much crown as it extends too high above the inside harness.

It may be all right for protection during air raids from flying objects, but it is rather clumsy.

We use the regular fireman's helmet of low design (bakelite) with removable weather flaps. It is light in weight and easily removed and will stay on the head under almost any condition.

E. D. Humphreville, Chief, Maywood, Ill.: I believe with the steel helmet of the type used by the OCD there is danger of electric shock and heat radiation.

We prefer the leather type of hard fiber helmet.

* * *

The following replies are in answer to a round table on fire alarm systems in places of public assembly.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What precautions do you take during blackouts to insure prompt and safe get-away from stations in case of fire alarm?

Do you use regular headlights, oscillating or flashing red lights, and sirens when responding to alarms during blackout?

Do you find response slowed up by blackout restrictions?

What recommendations would you make for safe and prompt travel for fires during blackouts?

G. R. McAlpine, Chief, Oklahoma City, Okla.: We do not require fire alarm boxes in schools, theatres, or other places of public assembly. In some cases there are fire alarm boxes in theatres. These boxes are connected directly to the fire alarm system. When the box is pulled the alarm goes through to fire alarm headquarters without delay.

If such boxes were hooked to some kind of a building alarm system, this would serve to notify the occupants of the building.

The master, or auxiliary boxes, that we have are serving a good purpose. However, the mechanism installed inside the building is delicate, and at times meddlesome people trip such systems and turn in false alarms. However, we believe this is offset by the fact that the inside boxes are handy to the watchmen in case of fire. For example, should the watchman discover a fire on one of the upper floors, he would not have to go to the telephone, or out on the street to a box, thereby eliminating delay in transmitting the alarm.

L. A. Moore, Chief Engineer, Fresno, Calif.: The City of Fresno does not require fire alarm boxes at schools, theatres or other places of public assembly. We believe, however, that the city should have an ordinance to cover installation of boxes in these places.

In our opinion, all private alarm systems should be connected to the municipal system through master boxes. We have in the city several such connections and we have not in any case had any serious loss where we have had the above connections.

In my opinion, the most perfect system is to have a sprinkler system with alarm connections going through a master box to our alarm system.

Frank W. Bennett, Chief, Durham, N. C.: In Durham there are twenty-one public schools and one private school. Alarm boxes are within a half block of these with the exception of three. One of these is four blocks from the nearest alarm box, the other two within one block.

I think it would be an advantage if the schools were connected to the fire alarm system through auxiliaries to a master box accessible to the public within the block. We have never experienced any trouble in getting alarms from schools in an emergency. The only factor entering into this would be the possibility of pupils pranking with the boxes, causing false alarms to be transmitted.

There are four hospitals in Durham that are not directly connected to the fire alarm system, although a box is within a half block of each. It is my opinion that there should be auxiliary systems from all these hospitals coming through the municipal fire alarm system.

G. A. Goodin, Chief, Muskogee, Okla.: We do not have fire alarm boxes in schools or theatres. However, we have a fire alarm box in front of each school, and each school must have a separate fire alarm system, and used for nothing but fire alarms. It is not connected with our system.

I believe fire alarm systems in schools should be connected with fire department alarm systems.

Central Fire Station of the Amesbury, Mass., Fire Department. Three pieces of apparatus, an engine, a hook and ladder truck and a combination, are housed in the building.

Manufacturers' Announcements

New Type Extinguisher Announced

The Nationwide Fire Prevention and Equipment Company, of 214 East 45th Street, New York, recently announced a new type of fire extinguisher.

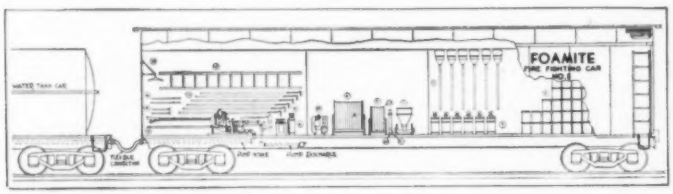
New Frost-Proof Extinguisher Recently Produced by Nationwide Fire Prevention and Equipment Company

The extinguisher involves the use of a non-freezing chemical charge developed by that company.

The purpose of this chemical is for the charging of new and old type soda and acid extinguishers. The chemical eliminates the use of soda and acid in soda and acid extinguishers without any reconstruction of the extinguishers. The chemical is non-injurious to materials or to persons. It is an "anti-freeze" that can stand a temperature as low as sixty-three degrees below zero. When this chemical is being expelled from the extinguisher and comes in contact with drapes, carpets, woodwork or other inflammable materials it produces a flame-proofing effect. It is a non-conductor of electricity, and does not corrode metals. In the demonstration the extinguisher threw a stream for a period of one minute and fifteen seconds, a distance of forty feet.

Foamite Fire Fighting Railroad Car

The tremendous increase in the freight transportation of highly flammable liquids has brought into present day economic life a new and dangerous fire risk.



Cross-Section View of Foamite Car

To keep step with the potential fire danger of these flammable liquid hazards, and as an invaluable aid combating fires in and around railroad properties, a new Foamite railroad fire fighting car has been designed, fully equipped to meet any emergency.

Specific plans for conversion of available box cars to fire fighting units, together with detailed recommendations as to the fire protection equipment, extinguishers, supplies, first aid material, etc., may be had from the manufacturer of the fire fighting equipment, American-LaFrance-Foamite Corporation, Elmira, N. Y.

Included in the equipment carried in Foamite fire fighting car are: Foamite foam generator, Model 15 or 21; Foamite Generator Powder Supply; one two-stage centrifugal water pump with 25 h.p. gasoline engine; one hose reel carrying 500 feet of 2½-inch single jacket fire hose; two Foamex 2½-gallon fire extinguishers; twelve five-gallon Commander pump tanks; two No. 4 one-gallon fire guns; twelve foam recharges for Foamex extinguishers; twelve recharges, Alfco crystals for Commander pump tank; six one-gallon V. L. recharges for No. 4 fire gun; twelve rattan brooms; six pike poles; two Alfco claw tools; two Longrange wire cutters; two crowbars; two fire axes; one 14-foot solid-side ladder with folding roof hooks; six Universal spanners; six Type G23 Master-Lights with non-spillable battery; one Model 10E Alfcospray nozzle; one Grippon holder; one Underwriter's play-pipe; one Alfcolite Model 12 generator lighting plant 1,250 watts D. C.; two 500-watt floodlights; one 250-watt floodlight; three 100-foot lengths cable; two Burrell All-Service masks No. 4M1772; one LaFrance inhalator No. 4M 1539; two extra oxygen cylinders; one All-weather first aid kit, 36 unit; one Foille spray kit for burns; two stretchers F. A. 2349; two asbestos suits, adjustable to size; six pairs asbestos gloves; six Model 1940 fire blanket metal container, each with wool fire blanket 66" x 84"; one hat and coat rail containing twelve coats and twelve Armotop helmets with twelve pairs Storm King boots on rack beneath.

Fire Apparatus Recently Delivered to Nogales, Mexico

This Seagrave pumping engine was built for the City of Nogales, Sonora, Mexico, delivery of which was taken at the factory by Chief Carlos Barrigan of the Nogales Fire Department, who is pictured behind the steering wheel. The Chief was accompanied by one of his men, Manuel Orozo, who is seated beside him. This apparatus was purchased from funds amounting to some 35,000 pesos, collected by the Nogales Volunteer Fire Department.

Booklet Published

A booklet entitled "How to Make Your Safety Equipment Last Longer" has been issued by the Mine Safety Appliances Company, Pittsburgh, Pa.

Covering every type of personal protective equipment, from protective hats, gas masks, respirators and gas instruments, through the list to safety clothing, this well-illustrated publication details the practical "do's and don'ts" of safety equipment care for key personnel, in a form readily adaptable for instruction of equipment uses.

This handbook is available without cost to any responsible fire department official, upon request to Mine Safety Appliance Company.

Mack Executive Offices Move to Empire State Building

Press of war wark has forced removal of the executive offices of Mack Trucks, Inc., from quarters in the company's Long Island City plant into new offices in the Empire State Building. The move took place on June 1.

The new home offices in the Empire State Building are on the twentieth floor and will comprise 22,900 square feet of floor space. This marks the return of Mack to New York City after a seven year absence.

The move, according to Mack offi-

(*Continued on page* 331)

THE NEW YORK TIMES, THURSDAY, JANUARY 7, 1943

FIRE ESCAPE: THE TENSE MOMENT WHEN LIFE AND DEATH HANG IN THE BALANCE

When Seconds Count use
ATLAS LIFE NETS

The fastest means of rescue, also a SAFE means of rescue. Hundreds of thousands of rescues and jumps into ATLAS LIFE NETS without injury. That should convince the most skeptical that jumping into the right type net is no longer a risky practice.

The advent of the ATLAS has overcome the old idea that nets are only used as a last resort. They are easily and quickly put in operation — instantly ready to safely rescue the panic stricken person who will jump before a ladder can be raised. SAFE — because of their sturdy construction and the special exclusive features which absorbs impact, reduces the shock on the jumper and on the men holding the net.

Ask us about kinetic energy or impact of falling bodies and how the ATLAS NET safe lands impacts of over 18,000 pounds.

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Some of the
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GREENFIELD, "
LOWELL, "
MILFORD, "
NO. ATTLEBORO, "
ONSET, "
PLYMOUTH, "
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TAUNTON, "
WORCESTER, "
U. S. NAVY
NEWPORT, R. I.
NEWPORT, "
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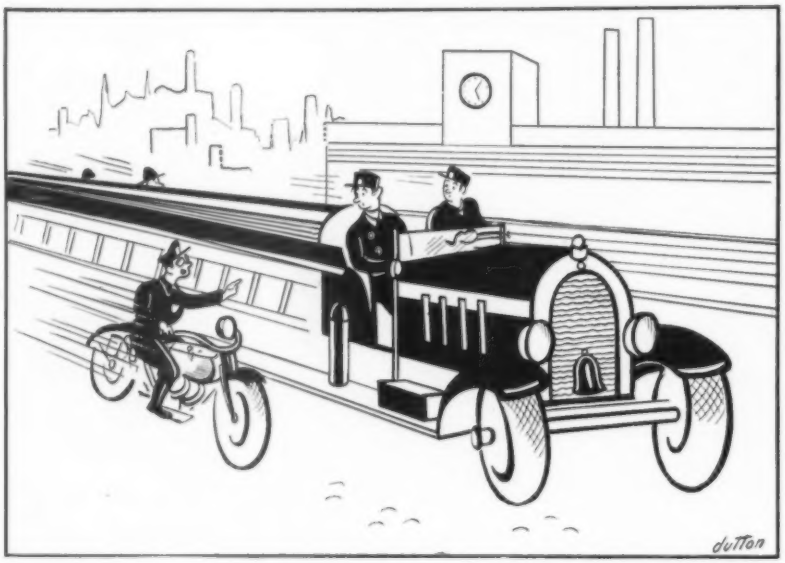
★

FALSE ALARMS



"Mind If I Chase You for a While—I've Been Getting Out of Practice Lately!"

Some Build-up

A traveling salesman was registering at a hotel. In his conversation with the manager he inquired what there was in the way of entertainment in town at the time.

"Well," said the manager, "do you like burlesque shows?"

"Yes, I like a good burlesque show," replied the salesman.

"Then," continued the manager, "we got just the thing for you. Zaza, the most popular burlesque queen in the country is appearing at the local burlesque house this week. Her act alone is worth twice the price of admission. She does one of those dances of the seven veils. She has beautiful hair, a lovely face, a marvelous shape; oh boy, wait till you get a load of her. The music plays real slow and she comes out on the stage and dances around and discards a veil and the music plays faster and she discards another veil, then the music keeps getting faster and she drops more veils until—say, wait until I get my hat and coat. I better go along with you."

Planning Too Far in Advance

A pedestrian walked up to a man standing on a street corner and asked him the time. He received no answer. He persisted with his question, but the man paid no attention to him.

A friend witnessed this little episode and he came up to the man and said, "Why in the world didn't you tell that fellow the time? I know you have a watch."

"Well, John, I'll tell you. It's this way. I tell him the time and what happens? We start talking. We get into an argument. Then he says, 'Come on, I'll buy you a drink and we can settle the argument.' So we go into the hotel and have a drink. Then we have another. After several drinks it's too late for him to go home so I ask him to the house for dinner. My daughter is home from college. He falls in love with her and wants to marry her. Now would you want a guy for a son-in-law who couldn't afford a watch?"

On the Level

A Philadelphia man called up a bird-store the other day and said:

"Send me 30,000 cockroaches at once."

"What in heaven's name do you want with 30,000 cockroaches?"

"Well," replied the householder, "I am moving today and my lease says I must leave the premises here in exactly the same condition in which I found them."

It was so cloudy that the barrage balloon was invisible from the ground. An elderly bystander looking on was frankly puzzled.

"How do you know there's a balloon at the end of that rope?" he asked one of the men on duty.

The soldier cocked an eye skyward and replied:

"If there isn't, I've done the Indian rope trick."

A foreman, while watching a ship carpenter working on the side of a boat, noticed that a workman would drive a nail into the side of the boat, then throw the next nail over his shoulder. When this continued, he called out to the man, "Hey, you, why are you throwing those nails away?"

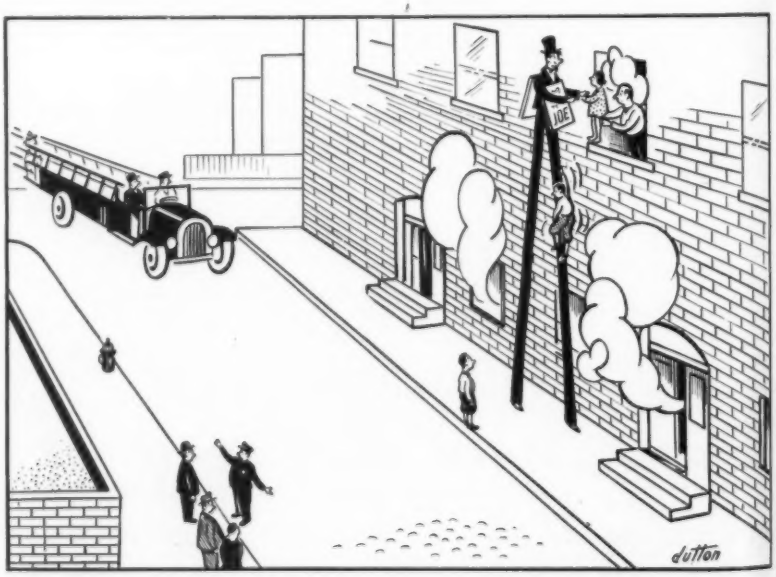
Back came the answer, "Why, they have the heads on the wrong end."

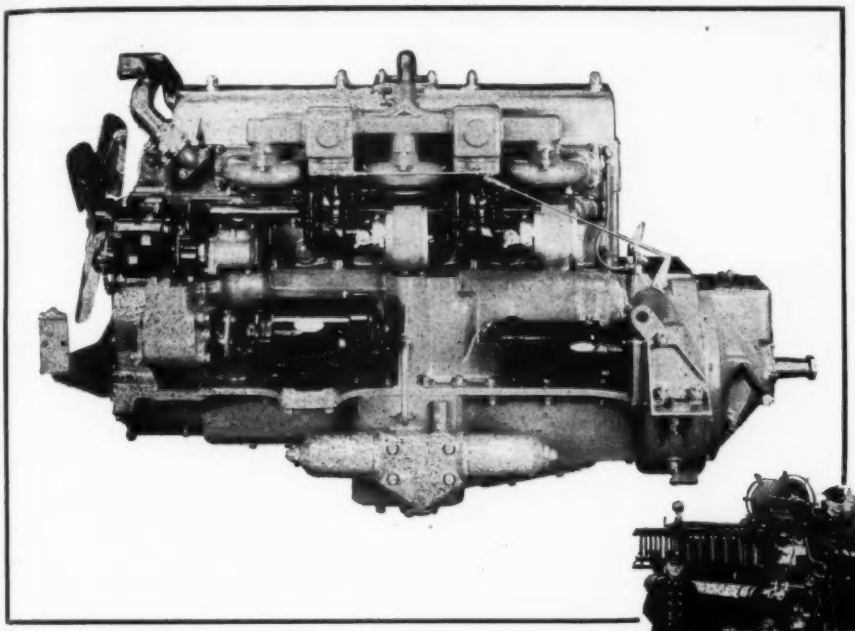
To which the foreman, thinking fast, replied, "You darned fool, save all that kind. We use those on the other side of the boat."

The war, somebody remarks, has changed folks' ways of living. Yes, and the tire and gasoline rationing ought to change their ways of dying.

Air Raid Warden: "I'm awfully sorry, Mr. Blumbaugh, that I arrested you for kissing a woman during the blackout. I didn't know it was your wife."

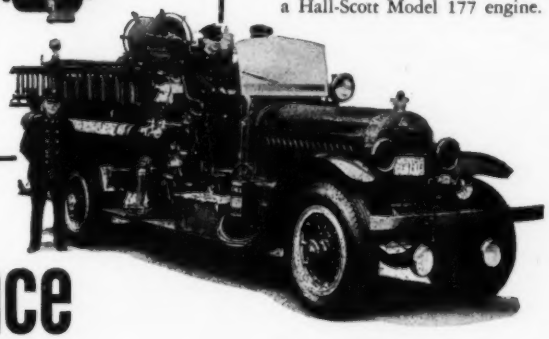
Blaumbaugh: "Oh, that's all right, old chap. Until you flashed that light in her face, I didn't know it either."





(At left) Hall-Scott Model 177 engine for fire truck service has 6 cylinders, 5½" x 6", a piston displacement of 855 cubic inches, a maximum torque of 735 foot-pounds at 1200 r.p.m., developing 243 h.p. at 2200 r.p.m.

(Below) Stutz fire engine, 1000 gallon pumper, owned by the city of Bellingham, Washington, repowered and modernized with a Hall-Scott Model 177 engine.



get '43 performance from '23 (or older) fire apparatus!

A modern Hall-Scott engine in any old, but sound, piece of apparatus will give you a thoroughly efficient unit, capable of modern road performance, at a small fraction of the cost of new. Hall-Scott engines—as expressly designed for use in fire apparatus—get apparatus to fires quicker. They do this, not by increasing top speeds, but *by raising average speeds.*

By providing markedly greater power in the lower engine r.p.m. ranges, Hall-Scott gives you far faster acceleration after each traffic slowdown, or each corner rounded. You also get the many other worth-while economies and advantages derived from the latest advances in modern engine design.

Hall-Scott has prepared a bulletin outlining in some detail the desirability of modernizing your older equipment by repowering. A copy is yours on request. Fire departments that once repower with a Hall-Scott engine, usually call for more Hall-Scotts to modernize other old units. They are also very apt to start specifying Hall-Scotts in any new equipment they may order. Let us know your requirements.

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PROVIDING top safety, comfort and durability on fire-fighting assignments everywhere, this new and widely-popular M.S.A. Helmet qualifies on every count for the added demands of wartime service. Falling and flying objects, chemicals, live wires—are countered by strong, non-softening, high dielectric laminated bakelite construction. *Comfort* on-the-job is assured by light, well-balanced design and special features. For the facts—write for Bulletin No. DX-5, or ask for a demonstration!

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WHAT'S BURNING?

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of May, 1943. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending May 31	Losses in Thousands of Dollars
Bergeronnes, Que.—House, mill and sawmill of Raymond Lapointe destroyed	50
Kingston, Ont.—Jackson Press Bldg. and equipment damaged	170
Bimidji, Minn.—Malone Furniture Co. store destroyed	60
Los Angeles, Cal.—Plant of Masterbilt Trailer, Inc. and nine house trailers built for U. S. Government	80
Peoria, Illl.—Two downtown bldgs. housing Sally Frocks store, Reeds' shoe store, Walgreen Co., and Pylie Studio, photographers destroyed	510
Raleigh, N. C.—Bldg. housing offices of N. C. Education Assn. and a market destroyed	80
Redmond, Ore.—H. H. Gilgore dairy plant destroyed	80
Toronto, Ont.—Meteghan Roman Catholic Church and adj. hotel at Meteghan, Nova Scotia destroyed	60
Hazard, Ky.—Knott Coal Co's 1,000-ft. coal conveyor destroyed	80
Casco, Wis.—Bldg. housing a funeral parlor, postoffice, furniture store, two apts., destroyed	50
Venice, Cal.—Abbot Kenney Bldg. housing Venice amusement pier and garage damaged	60
Miami, Fla.—Roxy Hotel and theatre bldg. destroyed	50
Bluefield, W. Va.—High school bldg. near Mullens destroyed	50
Herbertville, Que.—One hundred and fifty bldgs. including 26 dwellings destroyed	215
Kalamazoo, Mich.—Warehouse of White Sales Corp., flour mill machinery manufacturing destroyed	50
Vancouver, Wash.—Mess hall of the new Kaiser shipyard dormitory destroyed	80
Toronto, Ont.—Warehouse of Continental Auto Supply of Canada, Ltd. at Brandon, Manitoba	60
Bellingham, Wash. — Bellingham Chain & Forge Works, two bldgs. and machinery destroyed	65
Azida, Ont.—Five of the main bldgs. here destroyed	50
North Little Rock, Ark. — Bldg. of Dyke Bros. Lumber Co. and Elks Club damaged	170
Griffin, Ga. — The Spalding High School bldg. destroyed	75
Des Moines, Ia.—Rock Island Motor Transit Co.'s main office and garage destroyed.	80
Scottsville, Ky.—Allen County High School bldg. destroyed	80
Canton, Ohio—Bldg. housing the Atlantic and Pacific Co. food market, Flory Hotel destroyed	80
Tijuana, Mex.—Business district including a lumber yard, an electric shop and bottling plant destroyed	80
Kingston, Ont. — Mahood China Shop in business section and an adj. bldg. damaged	300
Los Angeles, Cal.—Abbot Kinney Co. occupied by business houses and garage destroyed	80
Los Angeles, Cal. — Mode Furniture Co. plant destroyed	90
Tionesta, Cal.—Planing mill of box factory Shaw Lumber Co. destroyed	115
Chicago, Ill.—Bldg. housing the National Tea Co.'s meat order filling dept. damaged	50
East Liverpool, Ohio — Steel forms, wood scaffolding and the fdn. of a synthetic rubber plant being built for the Kubuta Rubber Plant in Beaver County, Pa. damaged	80
Camp White, Ore. — Bldg. of the Army motor repair shop destroyed	115
Brunswick, Me. — St. John's Parochial School destroyed	115
Vincennes, Ind. — Baltic mill two frame houses and two freight cars destroyed	80

Las Vegas, Nev. — Temporary refinery at Basic Magnesium destroyed 50
Canton, Ohio—Thurin Furniture & Rug Co. warehouse destroyed 350
Yakima, Wash.—Bldg. and stock of Lentz Hardware Co. destroyed 115
Bedford, Ind.—Main mill bldg. of the Bowden Stone Co. destroyed..... 60
Dubuque, Ia.—Three story frame and brick warehouse used by Rooster Flour and Feed Co. damaged..... 75
Waysata, Minn.—Woodhill County Club damaged 60
Mankato, Minn.—Two-story bldg., stock, equip. and machinery owned by Kato Engineering Co. destroyed..... 80
Glasgow, Mont.—Frame house and adj. Great Northern Hotel bldg., housing grocery store destroyed..... 50
Portland, Ore.—Transfer & Store Co. destroyed 80
Shevlin, Ore.—Shevlin Power Co. damaged 50
San Diego, Cal.—Balboa Laundry damaged 50
Oklahoma City, Okla.—The Taylor Lumber & Supply Co.'s plant destroyed..... 80
Galveston, Tex.—Cotton Concentration Co. warehouse and 5,000 bales of cotton destroyed 60
Toronto, Ont.—Automobile store at Bic, near Rimouski in Quebec, destroyed..... 50
Dunbarton, Ont.—General store and trucks owned by Winter's Transport Co. destroyed 50
Naugatuck, Conn. — Three-story concrete block in business district damaged..... 50
Trenton, N. J.—Plant of the Cheney Metal Products Co. destroyed..... 50
Halifax, N. S.—Four story bldg. containing valuable stocks of hardware and ship's stores destroyed 50
Tampa, Fla.—Business block damaged..... 50
Gladwin, Mich.—Gladwin Co. Highway garage with 15 trucks, road grading and repair equip. destroyed..... 50
Cleveland, Ohio—Bldg. housing U. S. Wallpaper & Paint Co., Dazee Dinette and Goodwill Industries destroyed..... 50
St. Joseph, Mo. — Warehouse containing 2,000 sacks of meal in the soy bean mill of the Dannel Milling Co. destroyed..... 80
LaMar, Mo.—South side of the Courthouse Sq. and eight bldgs., consisting of the LaMar Lumber Co., tent factory, LeMar Baptist Church, cafe, billiard parlor, photo shop, electrical appliance store and bldg. owned by L. L. Pahlow, damaged.. 450
Cherryville, Pa.—Portion of Cherryville Foundry and dwelling of Leon Dietor destroyed 50
Scranton, Pa.—Bailey woodworking plant destroyed 80
Montrose, Colo.—Montrose Flour Mill destroyed 60
Los Angeles, Cal.—Freight depot destroyed. 60
Hamilton, Ont.—Dominion Lumber & Coal Co. yard destroyed; 4 nearby houses damaged 125
Hollywood, Cal.—Dwelling of Walter Wanger destroyed 150
Berkeley, Cal.—Storehouse of the Berkeley Gazette destroyed 80
Tomah, Wis.—High school damaged. Main section containing 750 lockers, school offices, and number of class rooms, destroyed 215
Kalamazoo, Mich.—Hangar of Russell Scott Flying Service at Municipal Airport, containing 14 airplanes and new parachutes, owned by Defense Plants Corps, destroyed 75
Holland, Mich.—Vogelsang Hardware Store and adj. business block destroyed..... 215
Laurens, S. C.—Eight storage warehouses and paint and decorating shop of the Laurens Glass Works destroyed..... 215

Pennsylvania Firemen's Training Conference to Be Held

Arthur W. Espey, Director of The Fire School, Public Service Institute, Department of Public Instruction, Harrisburg, Pennsylvania, announces the Fifth Annual Pennsylvania Firemen's Training Conference. Because of the demands of the Army and the Navy, the facilities at The Pennsylvania State College, State College, Pennsylvania, where the past four yearly conferences have been conducted, are not available this year. Therefore, arrangements are being made with Chief A. Nelson Yearick and the Lewistown Fire Department to hold the 1943 Conference in Lewistown, Pennsylvania. Owning an enviable complement of fire fighting apparatus

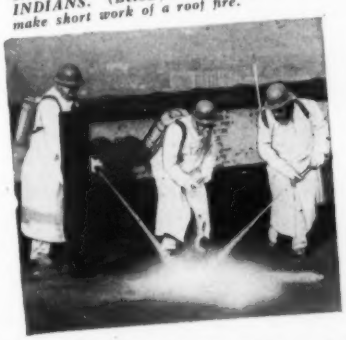
FIRE is the friend of the enemy!

USES CLEAR WATER ONLY
No chemicals needed. Big, rust-proof tank holds 5 gals. of water. Carries by handle or slung on back, thus enabling a man to get about quickly. No need to stop and pick up extinguisher. Arms are left free for climbing ladders, etc.

INDIAN FIRE PUMPS

Are the Fastest Means of Extinguishing Class A Rubbish, Grass and other Hot Weather Fires...

Industrial fire brigade at Lamson & Sessions plant, Cleveland, Ohio, depends on INDIANS. (Below) Using INDIANS to make short work of a roof fire.



Added responsibilities of war time fire fighting demand the last word in equipment. *INDIAN FIRE PUMPS* have long been the choice of firemen who want an extinguisher which will handle 70% of their calls without laying hose. Pump throws 30 to 50 ft. stream or slight turn adjusts nozzle to a spray. Be prepared for hot weather fires. *Order INDIANS Now!*

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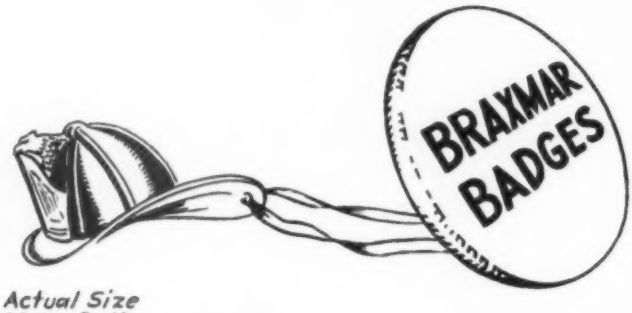

Actual Size
(Color Red)

The Little Red Hats have gone to war too!

FIRE CHIEFS for years have taken home to their kiddies the little red fire hats we have been pleased to hand out at fire conventions. We are sorry to say that for the duration at least we cannot provide our many good friends with the little tin hats. (The metal is being used to crown the Axis.)

However, we can still supply our customers with even better badges than ever before. All our badges are now made of sterling silver, sterling silver gold plated, rolled gold on sterling silver and 14 karat gold.

★

The blue covered catalog is the latest published, but write for our new price list. Only prices in the catalog on 14 karat gold items are still in effect. All auto plates are discontinued for the duration.

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John O. Veit, Pres.

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Standard for over 64 years

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Jobbers to sell Morning Pride Firecoats, wi Wing Freedom Sleeves, Chest Protector, Wa Wristlets, Synthetic Rubber. Write Morni Pride Mfg. Co., 1986 Home Ave., Dayton, Oh

FOR SALE

1—Model XF Amer.-Marsh Barton portable fi pump with Wisconsin Air-cooled engine attached Weight 150 lbs. Complete with 20 ft. 1½" har suction and 50 ft 1½" S. J. fire hose. Bras fittings throughout. New Unit. Also 1-40 ga Soda-acid engine on wheels, new hose, perfec condition. Box 25 c/o FIRE ENGINEERING, W. 40th st., New York, 18, N. Y.

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Fire Department Supplies for Sales; Nozzles, fo and shut off, siamese, wrenches, coats, India Tanks, Brooms, lights, Fire Extinguisher charges, hose and many other items used b Volunteer Fire Departments. For immediate de livery. Owner wishes to dispose of stock at once No sales to dealers. Write to Box No. 10, c FIRE ENGINEERING, 24 West 40th st., New York 18, N. Y.

WANTED

Experienced firemen not subject to immediat draft. Not over thirty years of age. Must hav best of references. Apply: Thomas F. Cuff, Fi Chief, Menlo Park, California. (Good conditions

which includes several ambulances and a lighting truck as well, the Lewistown Fire Department is admirably equipped to materially benefit the intensive fire service training program. Class rooms and auditoriums in the Lewistown High School and the facilities of the Vocational School will be utilized. A drill tower, smoke house for practical gas mask training, and excellent provisions for pumping operations will also be available.

As this year's feature of The Fire School is to be the fifth in the series of Annual Firemen's Training Conferences, the affair will be referred to as "The Victory Conference." The established plan whereby trainees are enrolled in Sections for the type of training that specifically applies to each respective field will again be followed.

Mr. Espey will direct the Conference while Chief A. Nelson Yearick will act as Business Manager. Mr. Charles E. Clark, Secretary respectively of The Pennsylvania State Firemen's Association and The Eastern Association of Fire Chiefs, Box 271, Wayne, Pennsylvania, will be the Conference Secretary, and all applications for enrollment will be made through him.

Chief Graham Dies

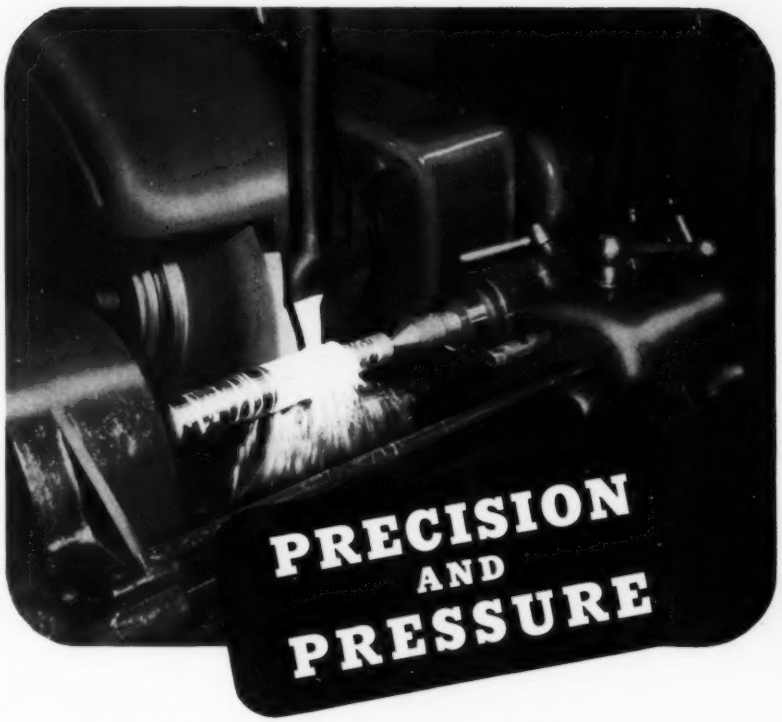
John H. Graham, retired Chief of the Montclair, N. J., Fire Department, died on May 10th. He was sixty-five years old.

Chief Graham was born in Montclair and joined the Fire Department in 1905. He became Chief in 1933 and held the post until his retirement last September.

The Watch Desk

(*Continued on page* 315)

F. D. was accused of turning in a false alarm. . . . *"It's a boy!"* was what Asst. Chief Harley McClure, Ottumwa (Ia.) F. D. heard when he lifted receiver of alarm phone at central fire station. Voice on other end of wire was that of fireman Ab Rubile who had just become proud father. Alarm call, which got men into turnouts and aboard trucks, was his way of spreading the glad tidings. . . . William Hough, 50, was cutting up an old jalopy in junk yard, with blow torch. He worked around the tank —when, BANG! He is survived by wife and five sons. . . . A distilling tower explosion touched off a 5-alarm blaze in Baltimore (Md.) which resulted in injuries to at least 75 firemen. An acid vat was source of trouble, none of the injuries being critical. . . . Another story of fatal tank explosion comes from Camden (N. J.) where Dale Howard, 6, ignited gasoline fumes while pounding a stone against an old underground gas tank at an abandoned civilian airport. The resultant explosion caused his death. . . . After sitting on the ledge of a 3-story building for two days until fireman George McArdle, Oakland (Cal.) F. D. risked his life in getting an extension ladder almost within reach, a cat jumped to the street below, landed unharmed in flower bed and disdainfully walked away. . . . In Burlington (Ia.) Wilmot Herbert Slep, aged 8, admitted he had started four fires. His specialty was touching off autos by inserting a waxed candy wrapper into an opening of a gasoline tank and lighting it. Wonder of it is, said Chief R. P. Collatt, that he didn't blow himself to bits. . . . In Carlsbad (N. M.) it was publicized in advance that Carlsbad was to have a 9 a.m. "pause for prayer" every day. The fire siren was to be sounded as a reminder. On the first day four volunteer firemen sprinted madly to their posts when the siren screamed. . . . John Murray, New York (N. Y.), facing disorderly conduct charge, heard his wife testify he had beaten their 4-year-old son. Murray told judge his home life had been difficult. **"The children set the house on fire six times"** he said. . . . One of the up-state New York Brothers told our inquiring reporter that the firehouse at Camillus (N. Y.) burned, with all the apparatus, hose and what not. . . . BELIEVE IT OR NOT, THE CHIMNEY AT GRANTS PASS FIRE STATION, OREGON, BURNED OUT—WHILE THE FIRE DEPARTMENT WAS OUT FIGHTING ANOTHER CHIMNEY FIRE! (Thanks to a Colorado reader for this item, and the following.) . . . In Burlington (Colo.) the city, its firemen and others are helping pay for new resuscitator. Men behind the campaign are Mayor Chalfant and fire chief Gassner. . . . In Batavia (N.Y.) Patrolman Carl Salway telephoned fire headquarters to say **"if the neighbors report there's a fire in my backyard, don't worry—I've got it under control."** Fifteen minutes later he called again. The fire was *out* of control! . . . In Denver (Col.) Mr. and Mrs. Wm. Robinson clambered out of their beds, annoyed by the incessant ringing of their doorbell. Their ire and drowsiness quickly vanished when they discovered the front hall of their house was afire. Flames had caused a "short" in the doorbell circuit. . . . According to Earle Robinson,



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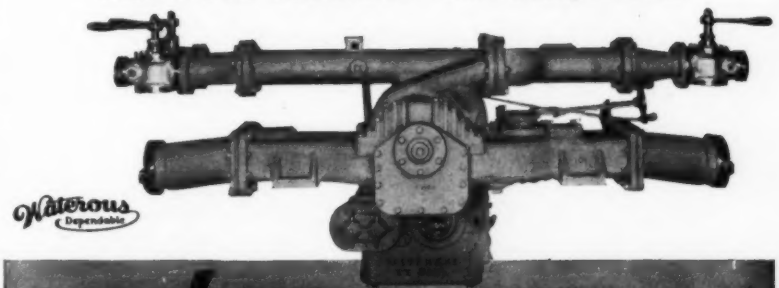

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CENTRIFUGAL-ROTARY

FIRE PUMPS

"Git thar fustest with the mostest"—

with BUCKEYE!

Fig. 930
Junior Type Roto-Ray

Fires are put out like General Nathan Forrest said battles are won, by "gitting thar fustest with the mostest."

Buckeye Signals get you there quickly because Roto-Rays and Whistles clear the way by night or day. And when you use Buckeye Shut-off Nozzles that *will not leak*, and various other accessories you have the finest products ever made for fighting fires.

You can count on Buckeye to do its part in any emergency. Write for Catalog.

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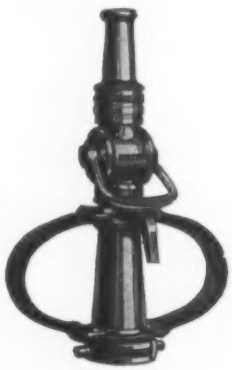


Fig. 900
2½" Shut-off Nozzle

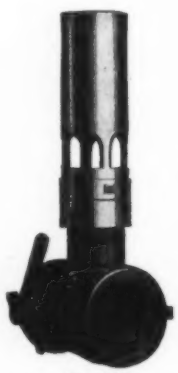


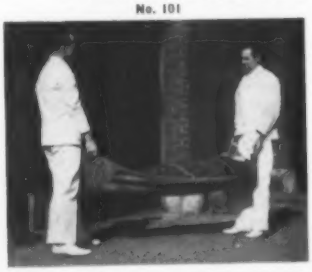
Fig. 935
Junior Chiefs' Car Whistle

BUCKEYE
Fire Department Accessories

Reeves

FLEXIBLE STRETCHERS

No. 101



Every casualty, no matter how slight or how serious, can be made worse by rough, improper handling. Reeves Stretchers can be used in the most inaccessible places.

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demon Iowa newsclipper, the fire station doors of a San Jose (Cal.) firehouse burst open. A gleaming engine roared out, its siren screaming. Then it sputtered to a halt—its engine dead. NO GAS! . . . Earle also sends us one on the vamps out Grants Pass way. Seems that the little log church at Merlin (Ore.) burned down. The village vol. F. D. was a bit late—**they were all busy at a meeting learning the methods of fire control!** . . .

Bomber Hits Chicago Gas Tank

A Consolidated Liberator bomber, an Army B24, crashed into a high gas storage tank on May 20, killing the entire crew. The tank, two and one-half miles southeast of the Chicago, Ill., airport, was virtually demolished and its 18,000,000 cubic feet of gas was set ablaze. The bomber was flying low on the way to land.

The crash occurred a few minutes before noon. Under a steady rain, the Chicago airport was operating by instrument flying rules. Ceiling was 500 feet and visibility three-quarters of a mile.

Approaching from the southwest, the bomber circled the airport to the north and east and was headed south when it flew into the tank. There was an explosion of terrific violence, and flames shot from the top of the steel structure, which is the property of the Peoples Gas Light and Coke Company.

Heat generated by the explosion was felt more than a mile away. There are no houses nearby. Nine company employees were on the grounds at the time of the crash, but none was hurt.

After the first explosion consumed the stored gas, 50,000 gallons of tar, used as a seal in the bottom to prevent gas leakage, caught fire. Eighteen fire companies poured water into the substructure. Only about 100 feet of the tank remained standing.

Powers of Connecticut State Fire Marshal Extended

, Legislation which one state senator said "probably" would have prevented the Cocoanut Grove disaster in Boston had it been on the statute books of Massachusetts was adopted by the Connecticut State Legislature on April 1 when the Senate and House concurred with the House on a bill extending the powers of the State Fire Marshal.

The bill, signed following its passage by Governor Raymond E. Baldwin, provides that the State Fire Marshal or his authorized agents in the State Police Department shall have the right of entry during "reasonable hours" to any premises where local fire marshals have reason to believe a fire hazard exists.

It also adds taverns, restaurants and hotels to the list of establishments such as theatres, garages and rooming houses which local fire marshals are required to inspect "as often as may be necessary in the interest of public safety, and at least once a year."

"Probably if Massachusetts had had a law of this nature in force the holocaust in Boston would not have occurred," Senator Henry H. Hunt of South Glastonbury declared before the Senate approved the measure unanimously.

THOMAS F. MAGNER.

WAR FARE

Alarms and Discussions Clipped and Culled from the War News of the Day, of Interest to the Fire Service.

Wives to the Rescue

In Egg Harbor (N. J.) when the fire alarm sounded recently, most of the men of the volunter fire department were away working in defense plants. So the wives—according to our New Jersey "clipper," answered the alarm with the apparatus and equipment. They were headed by Mrs. Emma Eccles, wife of the chief himself. And the report hath it that they manned hose lines and used brooms, pack-pumps and other implements to extinguish a spreading brush fire which threatened homes in the Farmington section. By the way, why not enroll the **"Waves"** into the F D? What chance would a fire have against 'em?

* * *

Fire Sets Off Raid Siren!

From Cranford (N. J.) comes word that, set off by a fire at Police Headquarters, Cranford's air raid siren wailed for twenty minutes t'other day, calling out reserve policemen and firemen, air raid wardens and other units of the Civilian Defense Corps.

An overheated furnace ignited beams and flooring and flames shot through a register at Headquarters not only deranging the air raid alarm but disrupting the police signal box system. It's understood there were several "overheated" wardens whose daily "routine" was upset by the unscheduled clamor.

* * *

"Crackling Silver Balls"

Reports from abroad hint that German Stuka planes are using a new-type bomb—described by one British officer as "silver balls that crackle and seem to explode in the air." The Ministry of Information quoted a British tank officer as saying that every can of gasoline on a truck was riddled by shrapnel after one of these bombs exploded, but the cans did not catch fire.

* * *

Musically Religious Bombs?

We've heard of bombs that whistle, "crackle" and "sing" but we never knew one that played musical instruments. Now comes a report from overseas about a workman of a South East British town who heard eerie notes coming from a Methodist church after an air raid. He investigated, according to the report, and found that a bomb explosion had started a blower in the church organ and debris had fallen on the keys, resulting in the weirdly musical notes. Oh well—now you tell one!

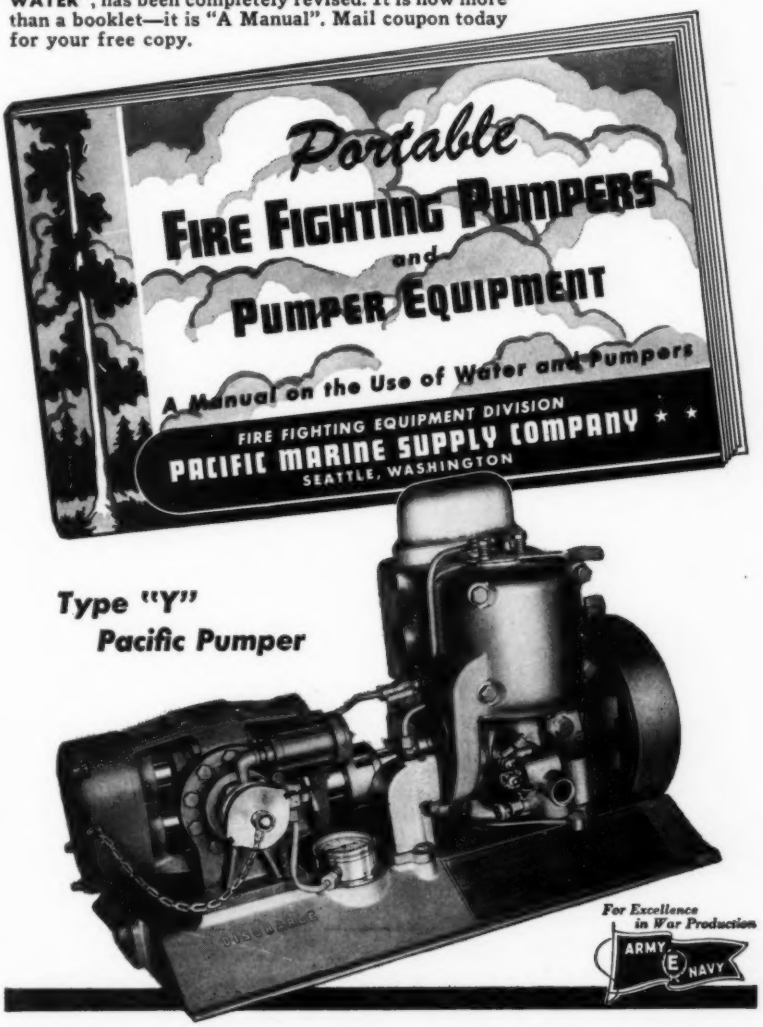
* * *

Common Bathtub Comes Into Its Own

Want a nice, safe spot in an air raid? Try the bath tub! This suggestion comes from London householders who have been reinvestigating safe spots in their homes. They say the best natural "shelter" is the bath. So they are making their baths as bed-like as possible. They point out that the bath is practically the only spot in the house that is almost always out of direct line with the windows. It also acts as a

JUST OFF THE PRESS!

The third edition of our original, "FIGHT FIRE WITH WATER", has been completely revised. It is now more than a booklet—it is "A Manual". Mail coupon today for your free copy.



THE MOST POWERFUL portable pumper ever built for its weight and size. Embodies improvements made possible only through years of specialized engineering and thousands of actual usage tests. Proved by Government Agencies. Base 24 inches by 12 inches; height 13 inches; net weight, complete, ready to operate, 70 pounds.

CAPACITY

Pressure	100	125	150	175	200	225
Gals. per Min.	63	59	53	46	40	20

FREE MAIL TODAY **PACIFIC MARINE SUPPLY CO.**
SEATTLE, WASHINGTON

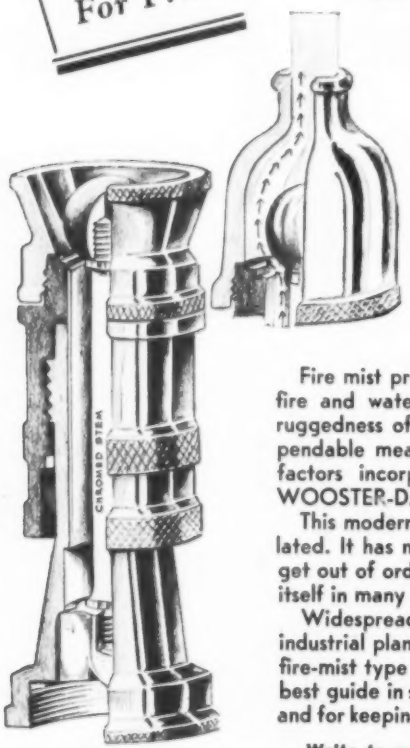
Please send me a copy of the new revised edition of **"FIGHT FIRE WITH WATER"** and a copy of your Portable Pumper Folder.

NAME.....

STREET.....

CITY AND STATE.....

A NEW MIST NOZZLE
Designed by "EXPERIENCE"
A Practical Nozzle . . . . . .
For Practical Fire Fighting



The improved
WOOSTER-DAY
FIRE-MIST
Nozzle is the last word in Mist Type Nozzles

No mist producing nozzle can give more efficient service results, regardless of pressures available, yet this product of superior quality will **cost** you much **less** than you think.

Save with Safety

Fire mist protects property and men and reduces fire and water damage. The simplicity in design, ruggedness of construction, quick, positive and dependable means of mist-spread control, are prime factors incorporated in the new and improved WOOSTER-DAY Fire Mist Nozzle.

This modern nozzle will not clog, is easily manipulated. It has no delicate or finely adjusted parts to get out of order. A simple design which has proven itself in many actual fire experiences.

Widespread use by municipalities, refineries and industrial plants, demonstrate the practical utility of fire-mist type nozzle. This widespread choice is your best guide in selecting the best mist producing nozzle and for keeping up with modern fire-fighting methods.

Write to us for names of users in your locality.

HOSE BRASS GOODS WB LINE THE WOOSTER BRASS CO. WOOSTER, OHIO

THE **WOOSTER BRASS COMPANY**
WOOSTER, OHIO

Order Your Copy today . . .

PROMOTIONAL STUDY COURSE
***for* FIREMEN**

By Fred Shepperd. Published in response to numerous requests from fire department officers and men working for advancement, this new book embraces the famous "Promotional Study Course" which ran serially in FIRE ENGINEERING during the past few years and proved to be so tremendously popular. Covering in chapter lessons most of the important phases of fire protection promotional study — mainly in questions and answers form—all of it is in the concise style generally used and preferred by civil service examiners.

To fire chiefs and other officials responsible for preparing examinations, this book will be found most helpful. And it is a mighty good reason, too, why fire officers and men should find it of inestimable value in studying for advancement.

Price 3.00 Postpaid

Your money back if not fully satisfied

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 W. 40TH ST., NEW YORK 18, N. Y.

dugout against "side attacks" and stray pieces of flying glass. Some advocates of bath "shelters" have even made wooden roofs for their tubs as further protection. Nobody's told us, however, how you're gonna fill your tub with water, ready for fire use, and yet use it as a shelter at the same time?

* * *

Blasts:

In Elkton (Md.)—famed matrimonial town—the Army and Navy are probing blast that killed 15, hospitalized 25 others, and resulted in minor injuries to 75. Fire followed the explosion, destroyed several buildings.

BRISTOL, Pa.: One person was killed, 15 others injured in series of explosions and a fire that wrecked one of 60 buildings at Rohm & Hass Chemical Company, working on war materials.

RADFORD, Va.: An explosion in the smokeless powder house at Radford Ordinance Works killed one, injured others.

CAMP SWIFT, Tex.: An explosion in course of demolition exercises killed a lieutenant and 7 enlisted men and wounded 5 others.

* * *

Speaking of Bombing—

We are not being bombed by the enemy, but we *are* running increasing risks of disaster from fire resulting from our own airplanes. The accounts of plane accidents in the daily press give food for thought. Take the following:

INWOOD, L. I.: Ensign Thomas J. Walsh, navy fighter pilot, was killed in attempted forced landing on a farm . . . after he had steered his disabled plane safely over the Inwood residential district and past two tall gas-storage tanks.

TUCKERTON, N. J.: An army plane crashed in flames at Germania, starting a new blaze in an area being swept by New Jersey's worst 1943 forest fire. Flames swept over 8,000 acres of timber.

KANSAS CITY: A two-motored Army bomber, caught in cross wind while landing, crashed through roof of a mess hall at Municipal Airport, killing Leona Childers, a waitress. Four men aboard were not badly injured.

RICHMOND, Va.: A fighter plane from Richmond Air Base crashed aflame near Centralia, in the woods. Resulting fire was extinguished without great damage.

HUMBOLDT, Sask.: Three occupants of a training plane were killed when the craft plunged into a team of horses pulling load of hay. Driver of team was seriously burned when hay caught fire. Horses were killed.

BOISE, Idaho: A heavy bomber crashed and burned at the crest of a ridge near Boise, killing three men, injuring six others. Luckily, no combustibles were near.

FLEMINGTON, N. J.: A Navy transport plane crashed and burned in a cornfield at Copper Hill, near here. Seven persons were killed. Five occupants of plane parachuted to safety. Plane just missed the farmhouse of Paul Giodah.

LONDON: A plane fell on a bus in Scotland, killing eleven persons, seriously injuring six. Blazing gasoline made rescue difficult.

According to figures released in the press in the nine months period to September, 1942, 1,700 Army pilots were reported killed in crashes. This is said to be one fatality for every 850,000 miles flown. No information is given on the kinds of accidents, or the number of fires started by planes.

Manufacturers' Announcements

(*Continued from page 320*)

tals, will add thousands of square feet of much needed floor space in the Long Island City plant for the production of war materials, notably fire engines for the Army and Navy. Mack recently expanded its truck and marine engine production lines at Plainfield and New Brunswick, N. J., and at Allentown, Pa., by acquiring factories in and near those cities.

National Powder Extinguisher Corporation Elects Officers

At the annual stockholders meeting of the National Powder Extinguisher Corporation, held at the company's offices in Jersey City, N. J., on May 8, the following directors were elected: Sherman Thursby, Walter E. Koons, Arlen Swiger, Charles A. Bianchi, Charles A. Koons, Michael Keefe and Milton Ignatius.

Charles A. Koons

At the first meeting of the newly elected directors on May 10, Charles A. Bianchi was elected chairman of the Board of Directors; Charles A. Koons, President; Walter E. Koons, Executive Vice-President and Treasurer; Michael Keefe, Vice-President and Sherman Thursby, Secretary.

The National Powder Extinguisher Corporation has been engaged in the development and sale of the *"All-Out"* fire extinguisher, which uses as an extinguishing agent 15 pounds of dry chemical discharged over a wide area and for a distance of about 30 feet under pressure created by standard 10-ounce cartridge of carbonic gas constructed to ICC specifications.

The extinguisher when fully loaded weighs 28 pounds and is constructed of 18-gauge steel, welded and tested hydrostatically to 600 pounds psi. It is not only a non-conductor but is also non-abrasive.

The extinguishing agent is moisture proof, assuring free flow of the powder under all conditions. It is an effective chemical for extinguishing not only flammable liquids, such as heavy and light oils, gasoline and highly volatile liquids, but is particularly adaptable to electrical equipment fires, as well as the so-called "A" fires.

The company is now in the process of further development of other types of equipment and enjoys wide distribution throughout the United States as well as the export field.

EVERY FIRE CHIEF KNOWS The IMPORTANCE Of A DEPENDABLE GAS MASK

BUY MORE WAR BONDS

When the fire gong rings, it is too late to check up on the dependability of the gas masks. This examination should take place immediately following return from a fire.

Periodical examinations should be made of each gas mask to determine its service, comfort and safety, to eliminate any serious difficulties later on.

The Acme FULL VISION All-Purpose Type FD Gas Mask has many times proven its safety qualities under the most severe fire service. Firemen have penetrated congested, smoke-filled areas with Acme Type FD Gas Masks, with a maximum of safety to themselves. With the Acme FULL VISION wide, flat Safety Glass Lenses, firemen enjoy NON-DISTORTED vision to all sides—an important feature found ONLY in Acme Gas Masks.

The exclusive half white and red indicating dial on the Acme Automatic Timer, reveals at a glance how much service life remains in the canister. It cannot get out of order, and never fails to operate.

The Acme Type FD FULL VISION All-Purpose Gas Masks and Canisters provide protection against Carbon Monoxide, Acid Gases, Organic Vapors, Toxic Smokes, and Fumes.

Write for Prices and Literature TODAY

ACME PROTECTION EQUIPMENT COMPANY, INC.
Manufacturers
3616 LIBERTY AVENUE Cable Address ACMEPROCO PITTSBURGH, PA. U.S.A.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the FACTS.

EDDY VALVE CO., Waterford, N.Y.

Responsibilities on the Home Front

Fires in industrial areas are more than disastrous these days. See how Crackerjack Fire Hose handles with the ease that makes for swiftest action. Tough as it is pliable, it's built for *extra years* of hardest usage. Write for details of Crackerjack and other brands of—

Fire Hose Made and Guaranteed by

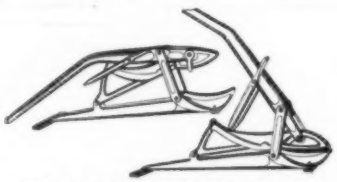
The **AMERICAN RUBBER**
Manufacturing Company

Factory and General Offices: PARK AND WATT STREETS, OAKLAND, CALIFORNIA

THE NEW PEERLESS HOSE CLAMP

Type E. The Result of 30 Years Experience in Hose Clamp Production

Demonstrated under Official Committee of International Fire Chiefs Convention at Toronto on a line from a pumper carrying 225 pressure and at Oklahoma City and New Orleans on 350 pounds hydraulic pressure. Witnessed by hundreds of Chiefs attending.



THE NEW PEERLESS HOSE CLAMP
— TYPE E —
SIMPLE CONSTRUCTION
INSTANT APPLICATION AND RELEASE
AUTOMATIC LOCK

•

SAVES TIME — MEN — EFFORT
Making New Methods Possible.

APPLY CLAMP ON FLAT HOSE
Check Water—Carry the Line Up Ladder or into Warehouse Empty —Release Man at Hydrant to Help Handle Line.

SAVE TIME IN MAKING CHANGES
No Tracing of Lines — To Shut Down — Instead Use the Men to Make the Changes.

•

SPECIFY
The NEW PEERLESS on NEW MOTORS
AND GET THE BEST

Sold by All Reputable Dealers
Patented U. S. and Canada

MANUFACTURED BY
KELLAM MANUFACTURING CO.
ATLANTA GEORGIA

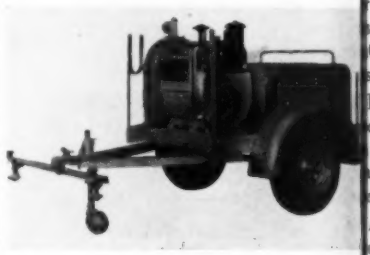
Pamphlet Issued

A pamphlet entitled "Guarding Amer ica's Hose Supply" has been issued b the Circul-Air Corporation, manufac turers of the Circul-Air fire hose drye 303 Dwight Building, Jackson, Mich Copies may be secured by writing to th manufacturer.

Installations of the Circul-Air fir hose dryer have been made in the vari ous camps of the armed forces and number have been shipped abroad. number of defense industries such a Ford, Chrysler, Dodge-Chicago, Pack ard, Chevrolet, Buick, Eastern Aircraft Pratt & Whitney, Chance Vought Air craft, Bendix Aviation, Ball Aircraft Glenn L. Martin, General Electric Western Electric, Cannon Mills, Her cules Powder, Remington Rand, E. I DuPont de Nemours, York Safe and Lock and many others have also made installations of the hose dryer. Munici pal installations run from very small villages to large cities and towns.

Fire Defense Pumps

Marlow Pumps, Ridgewood, N. J. makers of self-priming centrifugal, fir and force diaphragm, plunger sludg



Three-Inch Marlow Self-Priming Centrifuga Fire Pump

pumps, have recently placed on the mar ket portable pumps for fire fighting These consist of both skid and trailer units.

The smallest of the Marlow defense pumps, known as No. 22 HH, can be carried easily by two men and may be slipped into the back of a passenger au tomobile. It can discharge fifty gallons per minute at sixty-five pounds engine pressure.

No. 322, a 3-inch pump with 2½-inch hose and ¾-inch fire nozzle, can throw 175 gallons per minute a distance of 15 feet at eighty-five pounds pressure. Both of these pumps may be supplied mounted on steel or pneumatic wheels for greater mobility.

The trailer type shown in the photo graph is a complete and efficiently equipped piece of fire fighting. It is highly mobile and can be hooked on the rear bumper of any private car in a matter of seconds. The hose compart ment carries over 200 feet of 2½-inch hose, which in turn can be siamesed into two 1½-inch hose lines for double action at the fire.

Solid Fog Cone Developed by Elkhart Brass

The Elkhart Brass Manufacturing Co. Inc., of Elkhart, Ind., has presented a new development in its Mystery Nos

a spot like this, there is no substitute
speedy, decisive action. And that's
t what vital war plants get when
Gas fire-fighting equipment is within
y reach.

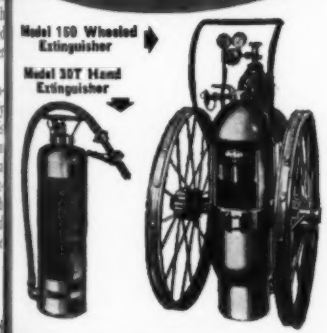
Fire "takes the count" fast when duGas
s into action. Here's why: immediately
hitting fire, duGas dry chemical re-
ses huge volumes of fire-smothering
es that quickly subdue fierce flames.

And no matter how hot or how cold
e climate, duGas dry chemical is always
dy for instant use. Important, too . . .
Gas is non-toxic, hurts nothing but fire.

Now, of course, all duGas dry chemical
e-fighting equipment is going to Uncle
m and his war industries. After the Axis
whipped, there will be plenty of duGas
e extinguishing products available to all.

IORITY INFORMATION GLADLY FURNISHED

duGas



E—New chart showing characteristics of all types of proved hand fire extinguishers. Write for copy today.

DUGAS ENGINEERING CORP.
OWNED AND OPERATED BY
ANSUL CHEMICAL COMPANY, MARINETTE, WISCONSIN

zle—the solid fog cone. This improvement is achieved without the addition of any moving part, and without any change in the basic design of the nozzle.

Elkhart Mystery Nozzle

A series of streamlined teeth, integrally cast into the outer barrel cause deflection of 40% of the nozzle stream—filling the cone and creating a solid fog. The teeth do not interfere with solid stream.

Steiner Head of Laboratories' Protection Department

Albert J. Steiner has been appointed engineer of the Protection Department of Underwriters' Laboratories

Mr. Steiner, who has been assistant engineer in the department since he joined the Laboratories' staff at the Chicago testing station in 1921, assumes the responsibility of heading the department from John A. Neale who has also been serving as Chief Engineer of Underwriters' Laboratories.

The Protection Department carries on tests of fire-resistive materials, such as walls, windows, doors, partitions, safes, roofing and other building materials, intended to prevent fire damage and to confine fire to the area in which it originates. The laboratories in which this work is done are equipped with unique apparatus and the largest building materials testing furnaces in the world.

Mr. Steiner is a graduate of Armour Institute, receiving his M. E. degree in 1921. He became a Fire Protection Engineer in 1935 at Armour Institute.

April Fire Loss

Fire losses in the United States during April were $34,241,000, according to the estimate made by the National Board of Fire Underwriters. These estimated losses, under fire policies, are on an incurred basis, including an allowance for unreported and uninsured losses.

The losses in April were 12.6 per cent less than in March, and 23 per cent more than in April, 1942. The losses for the first four months of this year were nearly $10,000,000 more than for the corresponding period in 1942.

VALVES HYDRANTS
and pipe line accessories

Practical firemen know the vital need of valves and hydrants that "work" when they are needed. M & H products are liked by municipal fire departments on account of their expert workmanship and highest quality materials. M & H Valves and Hydrants are dependable in an emergency.

A. W. W. A. HYDRANTS
Underwriters Approved

Conform to American Water Works Association specifications. Approved and listed by Underwriters' Laboratories and Associated Factory Mutuals. Well known and widely used for many years.

SPECIAL TRAFFIC MODEL (shown at right) is designed to yield at ground line under impact, repair being simply renewal of breakable bolts and breakable coupling on stem. Dry top, revolving head, easy to lubricate. High efficiency because barrel diameter not reduced and there are no working parts or obstructions in waterway.

VALVES: A. W. W. A. types, iron body, bronze mounted with double-disc parallel seat or solid wedge type. Non-rising stem, outside screw and yoke; or with sliding stem and lever. Also furnished hydraulically operated. Square Bottom type operates in any position. All are rugged and dependable, made of best material with highest quality workmanship.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

CIRCUL-AIR FIRE HOSE DRYERS *are Preferred*

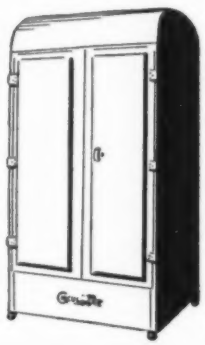
In Municipal, Industrial, & Military Fire Service

★ ★ ★ ★ ★ ***These Modern Dryers***

are doing a fine job of *conserving America's Hose Supply* in Army Posts, Navy Yards, Naval Air Stations, Marine Stations, Ordnance Works, Ammunition Depots, Airplane Factories, Tank Arsenals, Steel Mills, Shipyards, Engine and Propeller Plants, Chemical and Electrical Works as well as in Cities, Towns and Villages throughout the "Arsenal of Democracy."

Preferred Because: ★ ★ ★ ★ ★ ★

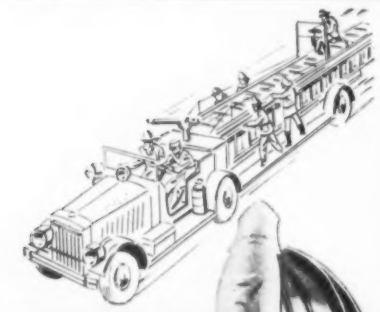
They *save RUBBER* and *COTTON*. . . . They are compact in size and require *very little floor space*. . . . Their quick-drying rate lessens the need for large reserve hose supplies. . . . They *improve new station design* by eli minating costly towers and unsightly hose racks . . . are easier to use and economical in service . . . and . . . they make good hose last longer by air-conditioning as they dry.



★ ★ ★ ★ ★ ★ ★ ★ ★ ★

THE CIRCUL-AIR CORPORATION

303 DWIGHT BLDG. . . JACKSON, MICHIGAN



PROTECT EYES and LUNGS Against SMOKE

DUPOR Combination MASK and GAS-TIGHT, Fog-Proof GOGGLES

The fire-fighters' favorite! Water soaked sponge filters and cools breathed air. Water inside goggles keeps fog off lenses.

SAMPLE OUTFIT $4.50

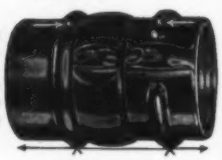
H. S. COVER, 68 Chippewa St., South Bend, Ind.

DOUBLE SERVICE *with* **BI-LATERAL**

This installation shows the position of the rubber lining in BI-LATERAL FIRE HOSE when held in a flattened position between calls into service. This is why we can save a city one replacement, because this hose will give double service of any hose constructed under the old method.

Also we can load 25% more on the apparatus bed actually making an $8,000 truck loaded with Bi-Lateral construction, cheaper than a $7,000 one loaded with other construction.

Here's the new DROP-FORGED rocker lug coupling (not cast bronze) with the swivel protecting feature.



BI-LATERAL FIRE HOSE CO.

20 No. Wacker Drive Chicago, Ill.

Michael Rayens Elected Vic President of A. D. T.

The American District Telegraph Co pany has announced the election of M chael W. Rayens as vice president of t corporation. Mr. Rayens has been acti in the affairs of the A D T for the pa

Michael Rayens

twelve years. On the day of his elev tion to the vice presidency of the A D he presided at the 152nd anniversary the birthday of Prof. Samuel F. B. Mor at the Morse monument on the Mall Central Park. He is president of t Morse Veterans of America.

Mr. Rayens is credited with origina ing uniforms for the Western Uni Telegraph Co. messengers at the time h was Superintendent of the New Yo office of W. U. at 195 Broadway. Star ing with the Western Union on Septem ber 1, 1877, Mr. Rayens was known a lessenger No. 406. On March 12, 188 he was recommended for promotio Later he became manager of the 1 Broadway office and on March 12, 189 he was advanced to Superintendent the New York City area.

In his telegraph career, Mr. Raye knew intimately such men as Andre Carnegie, Thomas A. Edison and othe equally famous telegraphers.

JERRY DALY

Hotel Fire Injures Two

Two soldiers were burned severe and more than 100 guests driven fro their rooms at the Mayfair Hotel Kansas City, Mo., by a fire that swe through the fifth floor.

The blaze started in a room occ pied by the soldiers. One of the fir to notice the blaze was a carrier f "The Kansas City Star," who warne the night clerk. The clerk called th fire department and then began tel phoning the guests.

The first fire company in had to wo from the fire hydrant, and the city wat pressure was not sufficient to deliver th water to the fifth floor level. Howeve pumpers arrived promptly and two hig pressure streams, one working from a aerial ladder and the other carried u the stairs, were soon working on th blaze.

The building was of fire resistive co struction, and the principal damage wa confined to the fifth floor.

Convention Dates

June 21-23—SOUTH EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Roanoke, Va. Secretary, Chief Walter W. Stephen, Box 904, Anniston, Ala.

June 21-25—IOWA FIRE SCHOOL. Annual meeting, Ames, Ia. Director, Lindon J. Murphy, Iowa State College, Ames, Ia.

June 22-24—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meeting. Rutland, Vt. Secretary, Chief John W. O'Hearn, Watertown, Mass.

June 24-26—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Baltimore, Md. Secretary, Chief Charles E. Clark, Box 271, Wayne, Pa.

June 26—INDIANA INDUSTRIAL & VOLUNTEER FIREMEN ASSOCIATION. Annual Meeting, Fort Wayne, Ind. Secretary, W. Henry Collisson, Winona Lake, Ind.

July—UTAH STATE FIREMEN'S ASSOCIATION. Quarterly meeting, Salt Lake City, Utah. Secretary, John J. Creedon, 192 Main, Bingham Canyon, Utah.

July 12-14—MARITIME FIRE CHIEFS ASSOCIATION. Annual meeting, St. John, N. B. Secretary, Charles A. Cunningham, St. John, N. B.

July 13-16—MICHIGAN FIRE COLLEGE. Annual meeting, University of Michigan, Ann Arbor, Mich. Director, Dr. C. A. Fisher.

July 23-24—CAYUGA COUNTY FIREMEN'S ASSOCIATION. Annual meeting, Auburn, N. Y. President, H. V. Wood, 21 French Avenue, Auburn, N. Y.

July 26-28—WISCONSIN ASSOCIATION OF FIRE CHIEFS. Defense conference. Milwaukee, Wis. Secretary, Chief Arthur Rahn, Two Rivers, Wis.

August 11—VIRGINIA STATE FIREMEN'S ASSOCIATION AND AUXILIARY. Annual meeting. Charlottesville, Va. Secretary, R. B. Barker, Newport News, Va.

Aug. 16-21—PENNSYLVANIA FIREMEN'S TRAINING CONFERENCE. Fifth annual meeting. Lewistown, Penn. Secretary, Chief Charles E. Clark, Box 271, Wayne, Penn.

Aug. 24-27—KENTUCKY FIRE SCHOOL. Annual meeting. Owensboro, Ky.

Aug. 24-27—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, St. Catharines, Ont. Secretary, Chief James Armstrong, Box 56, Kingston, Ont.

Aug. 26-27—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Sixtieth annual meeting, Hartford, Conn. Secretary, John Moehring, 56 Toms Road, Stamford, Conn.

Aug. 31-Sept. 3—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting. Chicago, Ill. Secretary, Chief Daniel B. Tierney, Arlington, Mass.

Sept. 6-10—WESTERN PENNSYLVANIA FIREMEN'S TRAINING INSTITUTE. Annual meeting. Pennsylvania State Teachers College, California, Pa. Secretary, Chief Henry Neill, Box 83, Vestaburg, Pa.

Sept. 18—NEW JERSEY STATE FIREMEN'S ASSOCIATION. Soldiers' and Sailors' War Memorial Bldg., Trenton, N. J. Asst. Secretary, Fred A. Trowbridge, Morristown, N. J.

Sept. 27-29—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, New York, N. Y. Secretary, Irvin Shulsinger, 8 East 41st Street, New York, N. Y.

Fireman Dies in Michigan Fire

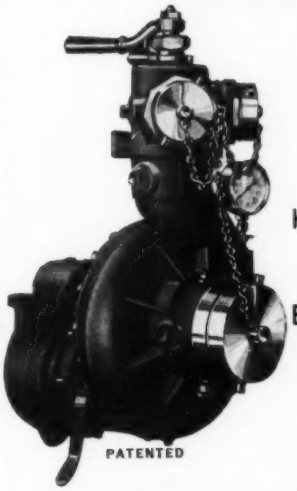
One fireman was killed and eight others suffered burns and injuries in a fire in two downtown buildings in Bay City, Mich., that raged for more than eight hours before being brought under control. The dead fire fighter was Captain Louis A. Villaire, trapped when the rear wall of one of the buildings collapsed.

Hart Chief at Bath Iron Works

Forrest L. Hart has been appointed chief of the fire department at the Bath Iron Works in Bath, Maine. He has been in the fire fighting field for fourteen years, and has had experience in city, industrial and air base fire departments.

Barton Front Mounted — AMERICAN-MARSH PUMPS — Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

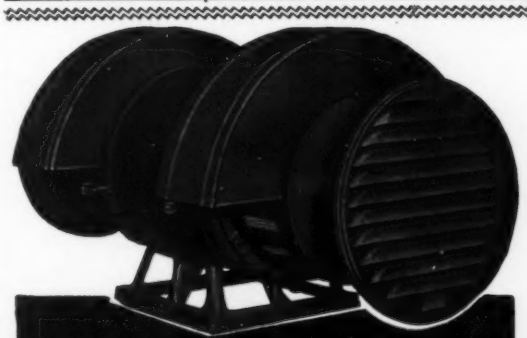


- FRONT MOUNTED FOR EASE OF OPERATION
- AUTOMATIC VACUUM PRIMER
- HIGH PRESSURE AT LOW ENGINE SPEED
- BOOSTER TANK OPERATION WITH TRUCK IN MOTION

Offered in capacities from 250 to 600 G.P.M.

AMERICAN-MARSH PUMPS, INC.

Battle Creek, Michigan, U. S. A.



STERLING MODEL "M"

GENERAL ALARM SIREN

You Can Depend On It *ALWAYS*

The Sterling Model "M" Siren, while primarily built for fire alarm signals, is particularly well adapted for the emergency duties attendant on National Defense.

This sturdy public alarm with its shrill, penetrating and distinctive vibrations meets and solves both problems.

Rugged and dependable — it is built to deliver 24-hour service. Its performance has never been equalled by any of the other sirens on the market today!

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WITHOUT DELAY

Promptness is vitally important in the treatment of burns. Gebauer's Tannic Spray in the dispenseal bottle is always ready for instant use. Stable, antiseptic solution forms pliable tannic film over affected area. Minor burns seldom require bandaging or dressing. Convenient. Economical. Literature on request.

Available through physicians' supply houses, safety equipment dealers and drug stores.

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TANNIC SPRAY

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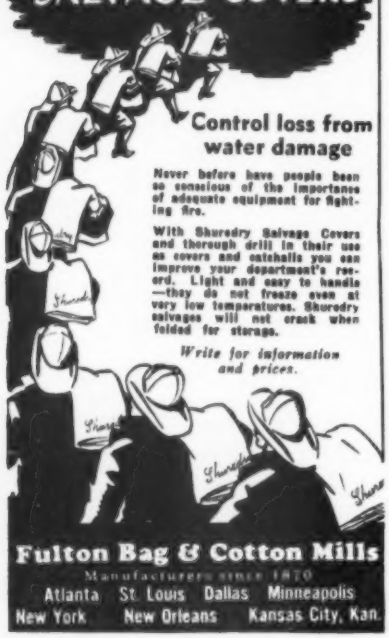
SALVAGE COVERS



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Never before have people been so conscious of the importance of adequate equipment for fighting fire.

With Shuredry Salvage Covers and thorough drill in their use as covers and catchalls you can improve your department's record. Light and easy to handle—they do not freeze even at very low temperatures. Shuredry salvages will not crack when folded for storage.

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Manufacturers since 1870
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New York New Orleans Kansas City, Kan.

Chief W. Q. Dowling Dead

Fire Chief W. Q. Dowling of the Jacksonville, Fla., Fire Department died suddenly on May 6.

The Late Chief W. Q. Dowling

He was born in Hoboken, Ga., sixty-three years ago, and came to Jacksonville in 1890. He joined the Fire Department on January 22, 1901; as a rookie hoseman, was promoted to foreman of Engine Station No. 4 on January 2, 1905; third assistant chief on January 1, 1920; second assistant chief on January 1, 1926; first assistant chief on November 11, 1928; deputy chief on April 1, 1930, and to chief of the Department on September 1, 1933. His career was marked by an exemplary devotion to duty, and intensive study of methods to improve the fighting of and prevention of fires.

Chief George E. Hare

He was a member of the international Association of Fire Chiefs, and a past president of the Southeastern Fire Chiefs Association.

He has been succeeded by Deputy Chief George E. Hare, who joined the Jacksonville Fire Department on December 1, 1909. He was made third assistant chief on January 1, 1926, and was promoted to second assistant chief on November 1, 1928. On April 1, 1930, he was made first assistant chief and on October 1, 1933, was appointed as deputy chief.

SEALAND TRAILER PUMPS

These mobile trailers made in 150, 250 and 500 gallon units are powered with gasoline motors, carry 500 ft. of double jacket Fire hose, and may be equipped with 100 gallon booster tanks. Skid mounted units can be furnished. Pumps can be purchased without trailers.

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Centrifugal Pumps—Fire Alarm Systems—Modern Fire Apparatus
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FIRE HOSE

THE MANHATTAN RUBBER MFG. DIVISION
of Raybestos-Manhattan, Inc.
Executive Offices and Factories . . . Passaic, N. J.

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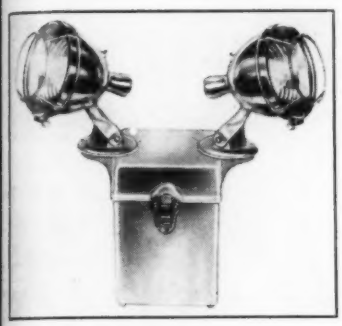
"Master ★ Lights"



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Prevents panics and tragedy

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NO TRICKLE CHARGER NEEDED

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FORTIFY FOR FIRE FIGHTING

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Headquarters for
"DEPENDABLE"
FIRE APPARATUS and FIRE DEPARTMENT SUPPLIES

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LOGANSPORT IND.

Annual Meeting of Westchester Plan

Charles Fahne of Pleasantville, N. Y., was elected President of the Westchester County Fire Chiefs Emergency Plan at its annual meeting held on May 19.

Others elected were Chief John Gibson, Mount Vernon, First Vice-President; Chief Edward H. Siller, Yonkers, Second Vice-President; Chief B. Richter Townsend, Hartsdale, Third Vice-President; Captain Eugene Riviere, Larchmont, Treasurer; Captain Cornelius B. Falch, Rye, Sergeant at Arms; Captain Alfred W. Denniston, Chappaqua, Recording Secretary; Captain Howard Greer, Rye, Financial Secretary; and Chief George Dale, Hastings; Commissioner William Livingston, Tarrytown; Chief Samuel E. Smith, Croton, and Chief James Van Twisk, Pleasantville, directors.

A traveling bag and a pipe rack with seven pipes were presented to Mr. Livingston, retiring President.

Among the speakers were Supervisor William C. Duell, Greenburgh; Frank Fox, Mount Kisco, President of the New York Volunteer Firemen's Association; William Raven, Valhalla, President of the Fire Commission; Captain John Gaffney, State Police; Mayor Graber, Tarrytown; Chief Stuart Potter, Greenwich; Rossiter Holbrook, County Deputy Director of Civilian Protection, and James C. Harding, County Engineer.

Chief Keena Dead

Michael T. Keena, former Chief of the Hartford, Conn., Fire Department, who rose from a substitute to the top rank of Hartford's firefighters during his forty-one years of department service, died suddenly on May 27 at his home, 141 Bond Street. He was sixty-seven years of age.

One of the most beloved chiefs in the history of the Hartford Fire Department, "Mike," as he was known to his intimate friends, retired on December 26, 1941, after nearly five years as Chief. During the past year he has been administrator of fire protection for the State War Council, a post he held when he died.

Tributes to the late Chief came from State Police Commissioner Edward J. Hickey, acting administrator of the War Council, Mayor Thomas J. Spellacy and Fire Chief John C. King, who spoke on behalf of the Hartford Fire Department.

"Chief Keena has been an outstanding public servant," Commissioner Hickey said. "His services on the War Council have been extremely valuable to the protective services. His council and advice were frequently sought and cheerfully given. We shall miss him greatly."

Chief Keena became head of the Fire Department at Hartford on June 1, 1937, succeeding the late John C. Moran. His appointment followed a steady rise from the time he became a substitute in 1900. His fire prevention work in 1941 won for Hartford first place in the nationwide fire waste council contest sponsored by the United States Chamber of Commerce.

In January, 1901, the late Chief joined the Department as a pipeman of old Chemical No. 9. The burning of the Capewell Horse Nail factory in 1902 was his first big fire. In August, 1908,

CONSERVATION FACTS
on how to save your hose

GOODALL RUBBER CO. INC.

Fact No. 8

NEVER PAINT HOSE FOR IDENTIFICATION

Never use paint in any form for marking hose, the oil in the paint is almost certain to soak through and separate the lining from the jacket and do serious damage to the lining also. If it is necessary to mark hose use indelible ink and then only sufficient to color the surface of the jacket—never let it soak through. Special crayon can be used for marking Fire Hose.

More than just Fire Hose. . . . The Goodall line includes the finest quality—

Chemical Engine and Booster Hose
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Couplings, Strainers and Nozzles
Coats, Boots and Utility Suits

We are looking for some live-wire distributors in certain territories. Write to our main office, giving a full description of your set-up.

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Branch Stocks in Key Cities Across the Country

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INVINCIBLE NOZZLES
PREPARE — PROTECT

Portable equipment is the watchword of today.

Buy—
INVINCIBLE NOZZLES
and enjoy the benefits derived by experience of the pioneers in the nozzle field.

Fig. 403

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BOSTON, MASS.
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SUCTION
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he was named a Captain and also was Acting Deputy Chief.

In 1913 he became a Second Deputy Chief. In 1919 he was advanced to First Deputy Chief and in 1924, following the death of Asst. Chief Daniel J. Dahill at a fire, he was promoted to succeed him. Then, on November 16, 1936, he was appointed Chief of Department.

When Chief Keena retired in 1941, after reaching the mandatory age of 65, the Hartford War Council immediately appointed him to head fire control activities in that city, and on June 2, 1942, he became state administrator for the State War Council. He had charge of coordinating fire department work throughout the state, providing for interchange of men and equipment, and supervision of training programs of firemen, auxiliary firemen and other special crews.

In 1940 Mr. McKeena was commended by fire officials for his work in saving 10,000,000 gallons of fuel in a fire at the Hygrade Oil Company at Rocky Hill, Hartford suburb. He directed men to send a heavy stream of water across an open man-hole from which blazing vapor was coming. The water cut off the air supply to the vapor-filled tank, and separated the flames from the vapor.

The late Chief Keena is survived by his wife, Mrs. M. Agnes Sleeth Keena, and two sons, both of whom are serving in the Army. Sergeant Joseph W. Keena is in England and Second Lieutenant Thomas E. J. Keena, former reporter on the staff of the Hartford Courant, recently went overseas.

THOMAS F. MAGNER.

THE Nation's FIRE WARDEN

For more than a quarter of a century this Fyr-Fyter Trade Mark has been the symbol of dependable fire protection. Today Fyr-Fyter is performing the biggest job in its career. Increased Fyr-Fyter production facilities are engaged in 100% war work. Our entire output is going to the Armed Forces, War Production Plants and other Concerns and Institutions classed as essential to the war effort.

When victory is won, we will have an improved and enlarged line of Fyr-Fyter extinguishers that will contribute even more than ever before to America's protection against fire.

THE FYR-FYTER CO.
Dept. 101,
Dayton, Ohio

ARMY E NAVY

FYR-FYTER

Correspondence

Farm Index System

To the Editor:

Friendship Fire Company No. 1, of Mount Joy, Pa., is a volunteer fire company, having a membership of 673 members at the present time. We have three pieces of fire apparatus which include two American LaFrance pumpers and one Dodge. We are a local borough with a population of 2878. We also serve our surrounding rural territory of approximately five square miles. Our services are available to neighboring communities if the emergency should arise. In the five square miles we have a total of 493 farms under our service. Naturally, you can see that all these farms are small since the territory is fairly thickly populated.

Three years ago, our Fire Chief, Ray Myers, suggested that something be done in order to attain better fire protection for our rural communities. He suggested that a number system be installed to answer this purpose.

We starting by numbering each farm in our district. We inquired from each farmer his name, whether or not he had a phone and also checked to see if there was enough water available in the immediate locality for fire protection.

We started our plan from the main road leading from town. The first farm out of town was called Farm No. 1; the second farm No. 2, and so on.

As a concrete example of our plan, we will assume that we were driving on the Manheim Pike, leaving Mount Joy. The

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FIRE ALARM SYSTEMS

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Fire Chief's Handbook . $4.00
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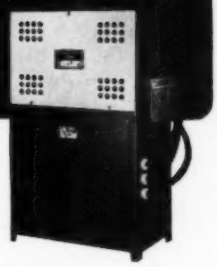
WITH A TUNGAR TWO-RATE CHARGER



OR 40-AMP. CHARGING OF 6-VOLT OR 12-VOLT BATTERIES

Model 6RB84B5 Charger

The Tungar Two-Rate Charger will completely recharge a run-down battery quickly and safely. Sizes are available for 6- and 12-volt batteries. The initial high-rate charge of 40 amperes automatically drops to a low finishing rate of 16 amperes for the last 20 per cent of the charge, then automatically cuts off.

Portable—can be easily moved to any desired location. Compact—requires less than one square foot of floor space. Complete—furnished with long D-c. leads and clips, a long A-c. lead which plugs into any convenience outlet of the proper rating, and two GEX45 Tungar Bulbs.

For more information, just write Section 633-58, Appliance and Merchandise Dept., General Electric Co., Bridgeport, Conn.

GENERAL ELECTRIC

first farm we will call the farm of John Smith, who lives on the right-hand side of the Manheim Pike, just outside the boro limits. This farm would be listed as Farm No. 1, name, John Smith; location listed on chart, first farm on right-hand side along Manheim Pike. If, for example, the next farm should be the farm of John Doe, who lives in a lane off the Manheim Pike on the left-hand side beyond the John Smith farm, this farm would be listed as Farm No. 2; name, John Doe; location listed on chart. Manheim Pike, turn left, first lane. Since a stream of water is close at hand for both farms, the chart would contain the information "Water available" for both listings.

A duplicate of this number system is carried on each fire truck, as well as posted in a large chart in our fire house. As soon as we receive a call from a farm number, we can tell by its listing the exact location and whether there is water available. If there is no water available, we will know immediately that we will have to use our booster tanks and if the fire is too bad, we will have to solicit outside help from neighboring companies to relay to the nearest water supply.

Exact Location Necessary

In order to save any confusion on road names, we always know the first main road out of town by its name. Any intermediate roads, regardless of whether it is a hard-surfaced road or a lane into a farm, is called a lane. This was done in order to save the confusion of deciding what might be called a lane. This has made a little more work, but it gives the exact location of each farm. We have 493 farms numbered in our district and each farm has a card with its number on it. We request each farmer to put his card at his telephone and if he does not have a telephone to give it to the closest farm with one. It is necessary to make periodical visits to each farm at least once a year to make sure that the names of those people living on each farm in our district are correct. Naturally the numbers will not change, but names will change as people move on and off each farm.

We have had a number of fires reported over the telephone by numbers so far and find that the system is working fine. There are, however, exceptions to this rule. Some people in the excitement sometimes overlook the numbers but we feel certain that as people are educated to this system, we will have a system which will be of great help to our fire company in locating and planning the best method of fighting the fire. The system has been used by our company since September 28, 1940.

As we are a volunteer organization, we have no paid firemen and the services of all who fight the fires are voluntary. We have a large chart posted in our fire house listing all the farm numbers and information required. As soon as a fire is reported, the number of the farm is posted on our bulletin board and any volunteer firemen arriving at the fire house after the engines have left will have definite information as to the exact location of the fire. This has been a very great help for our local firemen.

Yours truly,
LESTER MUMMA, Recording Secretary,
Mount Joy Friendship
Fire Company No. 1

THE New WHEAT Rechargeable Spotlight

MODEL 158

2500 FOOT BEAM
25000 CANDLE POWER
1000 HOURS OPERATION

Critical Materials Reduced to a Minimum to insure Availability

FEATURES

- ★ Positive "non-spill" Construction
- ★ Less expensive Operation than dry cells
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- ★ Simple to Charge and Water No need to take Lamp apart
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Are In The War Too!

Not all of them, but Army and Navy requirements are taxing our facilities to the utmost.

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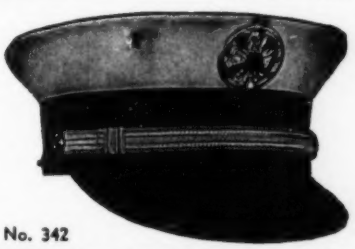

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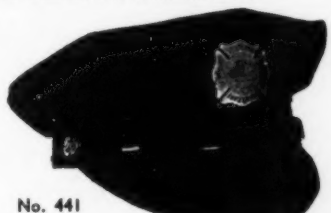

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demand these rugged, modern relief valves. Their simplicity and responsive dependability make them a must. Made in sizes from *1-inch to 2½-inches* with capacities up to 1600 g.p.m. and pressures up to 750 lbs. Write for descriptive literature describing the complete line of

ROSS RELIEF VALVES

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Trailer pumpers require valves made especially for this type of work, such a valve is the ROSS Trailer Pump Relief Valve. Made in sizes from *1-inch to 2½-inches* with pressure adjustments from 10 lbs. to 750 lbs. and capacities from 0 to 500 g.p.m. at 120 lbs. pressure.

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Balance in a fire pump must of course include static and dynamic balance of rotating parts. In a larger sense it includes balance of many other factors in design and materials.

Lastly, to give consistent, reliable performance, your fire pump should be balanced to the chassis and motor of the complete pumper.

Hale Fire Pumps are sold only to manufacturers of Fire Apparatus who engineer this balance into their product.

Write today for the Catalog and Folders on the complete line of HALE PUMPS.

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CONSHOHOCKEN, PA.

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JUNE, 1943

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1943 U. S. ARMY FWD

1911 U. S. ARMY FWD

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1862-1942

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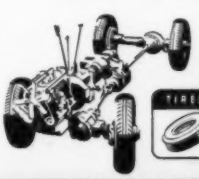

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"The Way To Hold a Gain Is To Beat It"

In addition to the many models of FOGNOZLS available for all hose sizes, we present a New, Approved

2½" WATER FOGNOZL

With Shut-off, High Velocity Fog, Low Velocity Fog (applicator type) or Straight Stream.

This New Fire Fighting Tool does all that the conventional nozzles do, and in addition makes available to you the following four advantages:

- PROTECTION TO PERSONNEL
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  A MATTER OF SECONDS
- REDUCED WATER DAMAGE
  A RATIO OF 1 TO 30
- ECONOMY & AVAILABLE SUPPLY
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GRISWOLD ORIGINAL WATER FOGNOZL

2½" National Standard Hose Thread

Quick-Acting, Floating-Gland Type Valve

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1 SHUT-OFF POSITION
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(High or low velocity)
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